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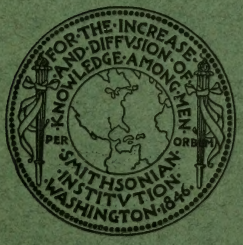
BULLETIN 113

THE TROYVILLE MOUNDS CATAHOULA PARISH, LA.

BY

WINSLOW M. WALKER



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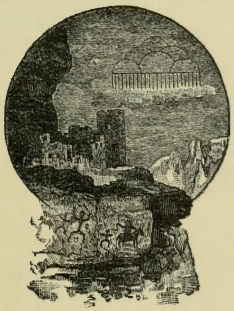

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LETTER OF TRANSMITTAL

SMITHSONIAN INSTITUTION,
BUREAU OF AMERICAN ETHNOLOGY,
Washington, D. C., October 10, 1935.

SIR: I have the honor to submit the accompanying manuscript, entitled "The Troyville Mounds, Catahoula Parish, La.", by Winslow M. Walker, and to recommend that it be published as a bulletin of the Bureau of American Ethnology.

Very respectfully yours,

M. W. STIRLING, *Chief.*

Dr. C. G. ABBOT,
Secretary of the Smithsonian Institution.

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THE TROYVILLE MOUNDS, CATAHOULA PARISH, LA.

By Winslow M. Walker

INTRODUCTION

During the summer of 1931, while investigating mounds and burial sites in the Red River Valley in Louisiana, the writer heard of the destruction of a large mound in the eastern part of the State where it was reported that great sheets of cane, pottery, bones, and several kinds of colored clay had been found. Unfortunately, on his arrival it was possible to salvage only fragments of this cane material which lay strewn over the surface of the site where the mound had formerly stood. Further examination, however, indicated that the town of Jonesville itself (fig. 1) occupied the site of an extensive group of mounds surrounded by a low embankment of earth, and the large mound which had been destroyed in the center of the town was also the central one in the group.

Additional research at Washington disclosed the fact that this group at Jonesville was the same one called "Troyville Mounds" (pl. 1) by Thomas and other early investigators, and the great mound, which was the one torn down, had been in the unusual shape of a cone surmounting a terraced pyramid and one of the largest mounds in the whole mound area. These considerations led to a determination to revisit the site to see if there were any possibilities for further promising excavation. Accordingly, a few months later when the writer was again in the South he made a more careful investigation of the spot and decided that perhaps the bottom of the great mound had not yet been reached. The weather was unfavorable for continued operations at this season of the year, so that it was not until the fall of 1932 that intensive excavations could be started. Digging was carried on for 2 months, both at the site of the great mound and at several other points in the group, but had to be unexpectedly terminated because of the unsympathetic attitude developed by the owners of the property.

Unfortunately, the people on whose land the great mound had stood were at first suspicious of the intentions of the excavators,

and knowing little of scientific aims or procedure, believed instead that the real purpose was to search for the "Natchez treasure", which, according to popular tradition, was buried in this or some other large Indian mound. It was, therefore, with reluctance that they at last consented to any excavation of the site at all, and then only on the stipulation that any such "money" found would belong by right to them. But as the work progressed and this form of remuneration did not materialize, their cupidity led them to formu-

FIGURE 1.—Map of Louisiana showing location of Jonesville.

late other demands, which finally became so unreasonable and so impossible to grant that the excavation of the great mound site had to be summarily stopped.

The writer wishes, however, to express his appreciation to the many citizens of Jonesville who did aid and cooperate in the work. Thanks are due especially to Mr. A. M. Beard, Dr. C. E. Enete, Mr. S. L. Marvin, and Mr. H. M. Wheeler for permission to dig on their respective properties, and to Mr. Charles Phillips, local newspaper editor. For data pertaining to the removal of the mound

and for the use of charts and equipment the expedition is indebted to Mr. J. B. Carter, engineer of the Louisiana Highway Commission, and members of his staff. The members of the Lions Club of Jonesville also aided by their attitude of helpful interest. Many of the townspeople were called upon for information, and even for the loan of tools and equipment, all of which was supplied with cordial good will.

To Miss Caroline Dormon, who assisted in the preliminary investigations, and particularly to Mr. Edwin F. Walker, field assistant during the final season of excavation, the writer wishes to express his appreciation for their efficient services.

Acknowledgment is likewise made to members of the staff of the United States National Museum and to members of the Division of Chemistry and Soils and the Bureau of Biological Survey in the United States Department of Agriculture for exact identification of the material collected. The writer is also grateful to his colleagues, Dr. John R. Swanton and Mr. Henry B. Collins, Jr., for helpful advice and criticism during the preparation of the manuscript.

LOCATION

In the northeastern portion of Louisiana lies a section of the Mississippi flood plain known as the Tensas Basin, through which meander several large streams and numerous bayous, forming a maze of waterways navigable for canoes in almost any direction, and even for larger vessels during periods of overflow. The principal river draining this basin is the Ouachita, which has its source in the vicinity of Hot Springs, Ark., flows southeastward to the Louisiana line, then south to its junction with Tensas River, whence it is known as Black River. This meanders in wide bends for 60 miles farther before emptying into Red River, thence into the Mississippi and the Gulf. Only a few hundred yards below the confluence of the Ouachita and the Tensas a small stream known as Little River comes in from the west, the outlet of a large body of water named Catahoula Lake, which also formerly gave its name to the stream which drains it. From this circumstance of three rivers emptying into Black River at almost the same point, the region was known from early times as the Trinity, and a settlement made there after the American occupation of Louisiana took the name Trinity in 1837.

South of Trinity across Little River is the present town of Jonesville. Its former name, Troyville, was derived from Troy Plantation, which formed part of a Spanish grant of 1,000 acres made to one John Hebrard in 1786, which included the site of a group of large mounds surrounded by an earthen embankment running from

Little River around to Black River on the south. The United States Geological Survey topographic quadrangle map of 1930 gives the location of this group as sec. 37, T. 8 N., R. 6 E., Catahoula Parish. The nearest point on the Mississippi is 18 miles to the east, and 11 miles north at the town of Harrisonburg is the nearest high land, part of the hilly escarpment which west of Red River is known as the Kisatchie Wold. Thus the site of the mounds themselves must be considered as in the bottom lands of Black River and hence it is subject to periodic overflow.

Rainfall is heavy throughout this region, a precipitation of about 55 inches being the annual expectancy. This results in yearly high waters which before the building of the levees deposited successive layers of sands, clays, and silts forming the rich "gumbo" soils of the lowlands. Deposits of reddish clays in the same vicinity are probably due to backwaters from Red River which have been known to extend as far as Jonesville.

Timber is plentiful and plant life luxuriant in these lowlands. The swamp cypress is the most characteristic tree, but several varieties of gum, oak, ash, hickory, chestnut, walnut, and willow are found abundantly, and conifers grow on the bordering highlands. Preparatory to the cultivation of cotton fields much of the land had to be cleared of thick canebrakes which extended for some distance back from the river banks, but this type of growth is now found only in the swamps of the Red River delta and does not extend very far up Black River.

It is curious to discover that these low swampy bottom lands of the Tensas Basin had perhaps a greater population in aboriginal times than they have today, judging from the large numbers of artificial mounds and earthworks found along all of the principal watercourses. But no larger or more pretentious group than the Troyville Mounds is known throughout this region, and the importance of its situation at the confluence of three rivers lends strength to the supposition that these mounds represented the capital of an extensive province in prehistoric times.

DISCOVERY AND EARLY INVESTIGATIONS

The earliest known description of these mounds is that given in the journal of the first Americans to explore the Ouachita River after it became part of the United States as a result of the Louisiana Purchase. On October 16, 1804, the naturalist, William Dunbar, and Dr. George Hunter set out from Natchez on the commission of exploration intrusted to them by President Jefferson. The trip was made in a small boat down the Mississippi to the mouth of Red River, thence up the Black into the Ouachita. Arriving

at the mouth of a stream which he calls the Catahoula (Little River) on October 23, he found there a lone settler, a Frenchman named Heberd (Hebrard?), whose house was built on a mound in view of several larger ones. Not having time to make a careful examination of the group on that occasion, Dunbar proposed to do so on his return, which he did on January 21 of the following year. He says:[1]

At this place are several Indian mounts, being mostly covered by a thick canebrake, it was difficult to examine them with due attention: There are 5 of the usual form [quadrilateral truncate?] placed within the angle formed by the black river & the Catahoula, another lies beyond the Catahoula; those are oblong, about 50 yards long by 25 wide on the top, with a rapid descent about 12 feet perpendicular; there exists a sixth mount of a very particular construction, the base is nearly square, & consists of three stories; M. Heberd, the proprietor, thinks the whole is 80 feet high, but I cannot persuade myself that it exceeds 40 or 45 feet, the ascent of the first story is not very rapid, & may be estimated at 15 feet perpendicular; a flat of 5 or 6 feet wide reigns all around the mount, from which arises the 2^{d} story, the ascent of which is not more rapid than the 1st & may be about 8 feet perpendicular; a 2^{d} flat of the same breadth is found above the 2^{d} story passing in like manner around the mount from whence arises the third story, whose ascent is extremely steep, it is necessary to support one'self by the Canes, which cover this mount to be able to get to the top; the form of this 3^{d} story is that of a very regular cone, terminated at the top by a circular flat of about 8 feet diameter, which has probably been less, the perpendicular height of the cone may be about 20 feet, having brought no instruments with me from the boat & moreover the mount being entirely covered by thick canes I had it not in my power to make an exact survey, which I hope to do upon some future occasion: The proprietor says that the base covers a square of about 180 feet to each side, & at each angle there is a kind of abutment or projection, from which an imperfect idea may be formed of the curious form of this singular mount; which may have been a temple for the adoration of the Supreme being; or it may have been a monument erected to the honor of some great Chief; or it may have been barely a watch tower. The country all around being alluvial, or at least subject to inundation, it is extremely probable that the five oblong mounts were places of residence, composing a considerable village, there is also the appearance of an embankment, which composes two sides of an imperfect square, the black river & the Catahoula forming the other two: this embankment has been probably nearly perpendicular without & in form of a glacis within;...

However, at a subsequent time Dunbar apparently returned to measure the great mound, for we find in his report to Jefferson the following:[2]

Description of mounds at junction of Catahoula, Washita, and Taenzas. There is an embankment running from the Catahoula to Black R. at present about 10 ft. high and 10 ft. broad.[3] This surrounds 4 large mounds of earth at

[1] Rowland, 1930, p. 317.

[2] Message from the President of the United States, 1806, p. 120.

[3] Hunter's Journal, as copied by A. T. Witbeck from the original in the American Philosophical Society collections in Philadelphia, has these dimensions as "about 10 feet high and 50 broad." This discrepancy in the breadth may indicate base width as opposed to summit width, or may be due to a mistake in transliterating the figures 10 and 50 from the original script.

the distance of a bow-shot from each other; each of which may be 100 x 300 ft. at the top, and 20 ft. high, besides a stupendous turret situate on the back part of the whole, or farthest from the water, whose base covers about an acre of ground, rising by 2 steps or stories tapering in the ascent, the whole surmounted by a great cone with its top cut off. This tower of earth on measurement proved to be about 80 feet perpendicular.

If this last statement about the height of the great mound is correct, then it is necessary also to revise the other measurements in proportion. Thus, in order to support a tower of earth 80 feet high on a base 180 feet wide it is probable that the easy ascent of the first story was up a slope of 42° to a height of perhaps 30 feet, the slope to the second terrace about the same to an additional height of 15 feet, and the summit cone 35 feet with steep sides at an angle of 50°, leaving an actual summit of 8 feet in diameter. Only by such an assumed reconstruction could the normal angle of repose for an artificial pile of earth at the accepted 1½:1 grade be obtained. Yet it presents the incongruous picture of a regular truncated cone set on a double-terraced square base, according to the description.

There is, of course, a possibility that the cone was originally a true pyramid which assumed a conical shape as a result of erosional activity over a long period of time, but the specific mention of a circular flat at the top would seem to substantiate the hypothesis that it was built as a cone and retained that form down to the time of Dunbar's visit. A possible explanation of the anomaly might be that the mound was first built as a flat-topped terraced structure to support a building of some kind and that at a later period the cone was added for a different purpose, perhaps by an entirely different people.

Major Stoddard visited the group soon after Dunbar and Hunter and gives virtually the same description of it. His theory was that part of the earthworks were designed for defense and that the mounds were built "for the reception of the dead."[4]

The group was considered important enough for the French engineer La Fon to list it on his map of the "Territoire d'Orleans", printed in 1806. The mounds are shown in the angle between "B. Cataoullou", emptying out of the lake of that name to the west, and "Riv. Noire", under the caption, "Monuments de 70 pieds de haut." As the French "pied" is equivalent to a fraction more than an English foot, this map furnished another corroboratory check on the height of the great mound. Just below this point on Black River is shown the trail from Natchez to Natchitoches, the old "Natchez Trace."

A new feature occurs in the description by Brackenridge, writing in 1817, who compares the great mound to the great Cahokia or

[4] Stoddard, 1812, p. 349.

Monks Mound in Illinois (fig. 2). The former has, he says, "a step or apron, and is surrounded by a group of ten or twelve mounds of smaller size." [5] This is a rather surprising statement, practically doubling the number of mounds recorded by the two earlier observers, yet it is not totally at variance if the extensive canebrake had disappeared or been cleared away, thus revealing numerous low mounds not visible to Dunbar.

There is no evidence to support the fantastic account by the romanticist Rafinesque of Kentucky, of "Four square teocallis of 240 and 22 feet high, equal, forming a square, joined by a wall and ditch, with an avenue leading to a conical teocalli 115 feet high (spiral road on it), on Bayou Cataoulou." [6] The same author men-

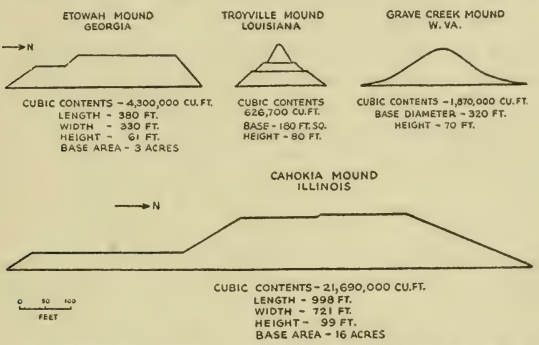

FIGURE 2.—Comparison of Troyville Great Mound with Cahokia, Etowah, and Grave Creek Mounds.

tions also "Five mounds of shells near Lake Cataoulou, 80 feet high. A high mound on Red River, built in 1728 by the Natchez." None of these have been found. The use of the term "Teocalli" shows the extent to which this writer has prejudiced himself in favor of the Mexican origin theory for the builders of the mounds, although there are but few analogies between the flat-topped terraced earthworks of the Mississippi Valley and the elaborately carved and decorated, stone-faced, temple-crowned pyramids of the Aztecs. It is admitted, however, that the basic concept underlying this cultural trait, i. e., the placing of ceremonial or religious structures on artificial elevations, may have a common point of origin which is to be sought rather to the south than to the north of the mound area.

In 1844 the historian Monette described the group as occupying approximately 400 acres, consisting of 1 large mound and 12 small

[5] Brackenridge, 1817, p. 175.
[6] Rafinesque, 1824, Appendix I, p. 35.

ones. "The great mound or terrace, about 100 x 50 yards at the base, rises as a pyramid to the height of 30 ft. then recedes, with a terrace on every side, and rises more than 30 ft. higher in a conical form. Major Stoddard, who examined it in 1804, estimated the elevation of the principal summit at 80 ft."[7] Monette then advances the ingenious theory that the mounds are the work of the Natchez, a remnant of whom are said to have fortified the group in their first retreat up Black River after the Fort Rosalie massacre. He also makes this the site of their famous last stand against the French forces of Perrier in 1731. (Cf. p. 66.) But the official records of that expedition do not support this theory, as they place the scene of the conflict farther upstream on slightly higher land, which on the De Crenay map of 1733 is shown on a branch of a stream named "B. Dàrgent" (Tensas?), almost directly north of Natchez.[8] If the Natchez had built their fort on any such eminence as the great mound or made use of it during the siege some reference to it would certainly have been made in the chronicles of Perrier, and there is no doubt but what it would have served admirably as a fortified location or at least as a signal tower to warn of the approach of the enemy. But as documentary records are silent and archeological evidence negative on this point this theory should probably be discarded.

Squier and Davis in their classic survey of Indian mounds in 1848 accord but scant mention to this group, "At the junction of the Washita, Tenza, and Catahoola Rivers in Louisiana, . . . of which no plan has yet been published." Not having visited the mounds themselves, they rely on the descriptions of Stoddard and Rafinesque, which they proceed to embellish as follows:

> The principal mound is said to be circular, four hundred feet in diameter at the base, ninety feet in height, truncated and having a level area at its summit, fifty feet in diameter. [sic!] The summit is reached by a spiral pathway, which winds with easy ascent around the mound, from its base to its top. This pathway is sufficiently broad to permit two horsemen to ride abreast. [!] From the summit a wide prospect is commanded. Here upon penetrating the earth to a slight depth, strong traces of fire are visible. The ground upon which the mound stands is somewhat elevated above the surrounding plain, which is low and marshy.[9]

The only statement worthy of consideration in this account is the mention of fire indications at the top. This might be confirmation of the signal tower theory or the even more imaginative one of a sacred flame kept burning continually on the summit. But if there had been any such pathway it is strange that it was not found and utilized by Dunbar to lessen the difficulties of a climb that he found so arduous.

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[7] Monette, 1846, p. 267.
[8] Swanton, 1922, pl. 5.
[9] Squier and Davis, 1848, p. 117.

In 1852 a Dr. Kilpatrick residing in the town of Trinity, just across Little River from the Troyville mounds, described the group as consisting of 3 large mounds and 9 smaller ones, 1 less than the total recorded by Monette in 1844. The Great Mound had been reduced from its original height of 80 feet to not much more than 50 feet. An interesting tradition concerning it is given. In 1819 Dr. J. M. Thompson visited the parish and was so impressed by the above-mentioned group that he made an effort to learn something more about it. It happened that while he was on a trip to Georgia he was discussing these mounds and heard from an intelligent half-breed Creek Indian the following:

> The large mound at the mouth of Little River was called the Great Fire, and was the central place of worship, as it was at the remarkable point where two rivers crossed, or where one river ran across another. The Creek Indians formerly occupied this country in great numbers, but having become involved in a war, or rather being invaded by a very powerful tribe from the seacoast, they were overpowered and forced to leave their homes and favorite place of worship, and retreat towards the east. Many of them betook themselves to boats, and retreated down the river into the Mississippi, through into Lake Pontchartrain, and scattered abroad over the country now known as Alabama and Georgia, and where they were found by the first white people.[10]

To prove that the narrator had definitely in mind the site across from Trinity, Dr. Kilpatrick states as a fact the remarkable phenomenon, "that for many months in the year the waters of the Tensas River run across Black River into Little River, and this last named river runs upstream." (Sic!) This statement would hardly seem worth further credence were it not true that the writer himself heard of instances of some of these swampy bayous backing up in times of excessive rainfall when the main streams experienced a rapid rise and spread back for some distance up their tributaries. Whether or not the legend of a former Creek occupation of this particular region is correct, it is true, according to Swanton, that most of the Creek origin legends point to an ancestral home west of the Mississippi,[11] and at least the description of a mound called the Great Fire is interesting material for the advocates of the theory that the Great Mound was a ceremonial fire tower.

During the period of the Civil War the Great Mound underwent an alteration which greatly changed its appearance by having the summit cone virtually cut down to provide space for a rifle pit at the top. The displaced dirt spread down the slope principally on the north and south sides to such an extent that when Palmer saw it in February 1883 it appeared almost 90 feet longer from north to south

[10] Kilpatrick, 1852, p. 266.
[11] Swanton, 1928, pp. 33–75.

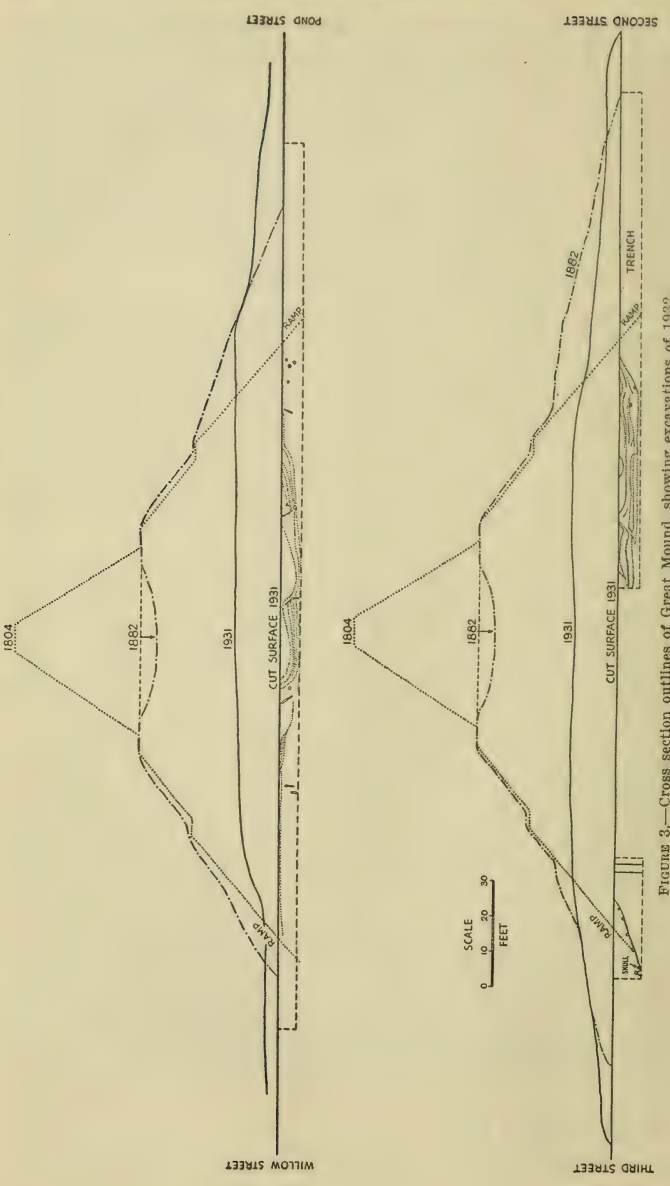


FIGURE 3.—Cross section outlines of Great Mound, showing excavations of 1932.

than from east to west, and so gashed and mutilated that the observer found it difficult to determine just what the original shape had been. Evidently he did not know of Dunbar's description.

The plan given in figure 3 embodies the dimensions given by Dunbar. Palmer's report provided Dr. Cyrus Thomas with the data for his brief description of the Troyville mounds, which occurs in his "Report on the Mound Explorations of the Bureau of Ethnology", and in it he gives a plat of the group showing its location

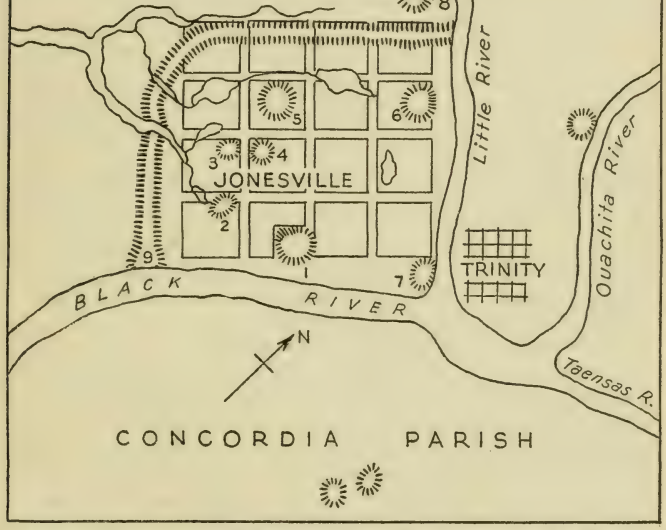


FIGURE 4.—Plan of Troyville Mound group, about 1871 (after Thomas and Beyer).

at the town of Troyville on Black River.[12] It is not, however, wholly accurate, as the town which was laid out in 1871 was composed of 16 blocks filling the entire area inside the ancient embankment, and these blocks were oriented parallel to the axes of the two rivers bordering it. Thus early in the town's history nearly all of the mounds were subject to a greater or lesser amount of disturbance. The Great Mound, No. 1 on the Thomas plat (fig. 4, No. 5), occupied the major part of block 11, lying across it from north to south. Beyer's plan, made in 1896, which shows 9 mounds, is

[12] Thomas, 1894, p. 251.

more nearly correct, but by the time he visited the group the large ponds shown on the earlier plan as connected with 3 arms of a bayou penetrating the embankment from the southwest had dwindled to such small proportions that their former outlets were no longer recognizable, and the embankment is indicated as an unbroken ridge forming the western and southern bounds of the town and terminating in a mound on the bank of the Black River.[13] Both of these plats have been utilized in preparing the plan of the group presented as figure 4 and the mounds are numbered as Beyer listed them.

Thomas describes the group as consisting of 6 mounds (Beyer found 7), within an enclosing wall or embankment, and artificial ponds and canals. The Great Mound was then (1883) 45 feet high, 270 feet long, and 180 feet wide, and in one of the deep gashes on the north side, which was as much as 25 feet in depth, a layer of "charred cane 1 foot thick" was visible at a height of 30 feet, extending into the mound's interior. No attempt was made, apparently, to trace out more of this cane, although a specimen of it was brought back.

Concerning the other mounds the following information is given:

Mound 6 (Beyer No. 2). 15 feet high, 90 feet long, 75 feet wide. Two excavations disclosed nothing but hard greasy clay.

Mound 5 (Beyer No. 1). 200 feet long, 90 feet wide, 8 feet high. Ancient burial mound used as modern cemetery; pottery found with skeletons.

Mound 4 (Beyer No. 7). Nearly destroyed, originally 20 feet high.

Mound 3 (Beyer No. 6). Largely destroyed.

Mound 2 (Beyer Nos. 3 and 4?). Largely destroyed.

The four artificial depressions which presumably furnished most of the dirt used in the construction of the Great Mound were connected with each other and the bayou to the southwest by canals, "which are still from 10–12 feet wide and 5 feet deep. As the bayou connects with the [Black] river 3 miles below, it is apparent that canoes could reach the inclosure by this route." Of the embankment Thomas continues, "The wall which encloses the area on the south and west is very nearly or quite 1 mile in length, and at the points where least disturbed from 7 to 8 feet high and 20 to 25 feet wide."[14]

Prof. George E. Beyer, of Tulane University, visited the mounds in June 1896 at the instigation of the Louisiana Historical Society.

[13] Beyer, 1896, pl. XIII.

[14] Squier and Davis, 1848, in footnote to p. 118 give Dr. M. W. Dickeson as authority for the statement that "the great enclosure at the Trinity . . . is partially faced with sun dried bricks", and that many of the ditches and ponds of Louisiana "are lined at the sides and bottom with bricks." The bricks are said to be from 16 to 18 inches in length and of proportional width. Presumably the observer has been misled by the cracked and dried appearance of the clay chunks which he took for "bricks." Nothing like "bricks" was found in 1932.

The name of the town had previously been changed from Troyville to Jonesville, which it remains to the present day. Beyer, although he did a little digging in some of the other mounds, devoted most of his attention to the Great Mound, which he says Prof. C. G. Forshey had visited in 1840 and found to consist of two sections—a base of about 40 feet in height, and a tumulus surmounting it of nearly the same height, which he called the Great Temple Mound. Beyer confirms what Palmer had previously reported, that the tumulus had been leveled down to the top of the second terrace and a large pit scooped out of the platform to serve as a fortification during the Civil War, and further he discovered on the north side of the mound a thick layer of what he calls "charcoal", probably only the fragments of the cane layers which on exposure to sun and air quickly turn black and tend to curl and crack into tiny pieces. This was found—

extending about 20 feet around the mound—in some places 12 to 14 inches in thickness. This bed consisted of buried cane and wood, in all likelihood sweet gum, and had been deposed crossways in systematic layers. There were, however, no signs of bows, crockery, or other remains. A little further to the west, but between 3 or 4 feet higher up, I discovered another layer of charcoal; it consisted, like the former, of cane and wood, and, although I followed it up to a distance of about 8 feet into the interior of the mound, all search after human remains or utensils proved futile." [15]

He concludes that the mound must have been terraced on the northwest side at the time these supposed "fires" were kindled, but no traces of fire could be detected elsewhere on it. Pottery and chipped artifacts which had been found in earlier times scattered over the surface in innumerable quantities no longer remained, due to the washing away of so much of the original mound surface.

Beyer inclined to Forshey's theory that the mound was built as a place of worship rather than as a burial tumulus. He advanced the idea that smoke from a fire kindled on the summit could have been seen within a radius of 30 miles and could have served as a direct means of communication to the Larto Lake group, the Little River mounds, and those on nearby reaches of the Black, Tensas, and Ouachita Rivers.

Most of the other mounds were already serving the purpose of house foundations or elevations cleared for other buildings. Mound 7 (Thomas No. 4) on the bluff had been graded down to allow easier approach to the steamboat wharf, disclosing potsherds and implements plentifully strewn about. The greater number of burials were, however, found not in the mounds but along the bank of Black River. Sinking a pit into what was left of Mound 2, a single skeleton accompanied by vessels of earthenware was found, but no other artifacts.

[15] Beyer, 1896, p. 29.

The pottery displayed a variety of "exceedingly pleasing designs in ornamentation", which were also found on the potsherds scattered over the surface of the embankment.

The subsequent growth of the town of Jonesville resulted in a correspondingly rapid demolition of the mounds, particularly of the Great Mound, which supplied dirt to fill up the hollows and ditches from which it had been taken originally. Even dynamite was resorted to in order to hasten the process, and the dirt distributed to form a shelf or bench out to the edges of the block. Even so, a good-sized hill remained which served an extremely useful purpose as a refugee camp during the floods which came between 1912 and 1927, since it was the only spot in the town above the reach of the water (pl. 2, *a*). But the owners still regarded it as a hindrance to the development of their property and determined to get rid of it at the most favorable opportunity. The decision of the Louisiana Highway Commission to build a bridge across Black River just south of the main part of the town, to join the ends of the proposed new highway, provided the longed-for chance. A long, high approach had to be built at each end of the bridge and the mound offered the most convenient and satisfactory source from which to obtain the earth needed. A contract was made with the owners to permit the removal of 21,000 cubic yards of dirt, which resulted in reducing the mound nearly to street level.

The work of removal was begun during the early part of the summer of 1931 and continued without cessation for a period of more than a month. Day and night shifts were employed, and it required steam shovels, horses, and scrapers, and large gangs of laborers with picks and shovels to accomplish the undertaking, so hard and closely packed was the clay which the aboriginal builders had placed there. During the cutting down of the mound nothing of interest was found except a variety of colored clays—red, brown, gray, blue, and olive—and extensive layers of the cane sheets, some of which were quite thick, separated from other layers by masses of clay. This cane was still a greenish yellow when first exposed, but almost immediately turned black on coming in contact with air and sunlight, which probably accounts for its charred appearance according to Palmer and Beyer. Much of it, however, had a bright blue tinge due to the presence of a substance later identified as "vivianite", a constituent of the river-bottom clays. Reports among the bystanders that human bones were discovered could not be verified.

Various descriptions of the appearance of the cane layers in one or more dome-shaped contours were obtained from townsfolk who were present during different stages of the removal. But the only lucid account was furnished by Dr. H. V. Howe, geologist at Louisiana State University, Baton Rouge, who kindly furnished the writer

with photographs and data secured during a day's visit to the site in July. At that time, according to Dr. Howe, the whole southern half of the mound had been cut down and cleared away by a steam shovel cutting along an east-west line across the block. The machine was then standing on a shelf about 5 feet above the base of the mound, tearing up great strips of cane in its scoop along with the clay. Traces of a terrace level could be seen part way up the outside slope, although the face of the cut was not much over 20 feet high at the time. Near the center of the cut were four circular areas of cane, the largest being 24 feet in diameter, consisting of several nearly con-

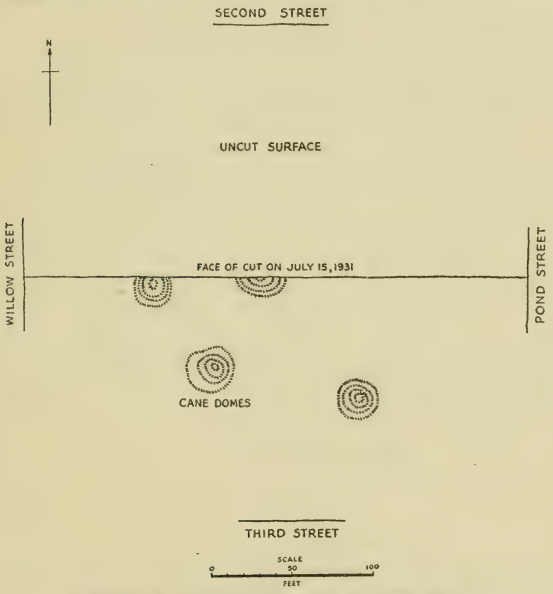


FIGURE 5.—Cane areas according to Howe, 1931.

centric layers of clay and cane, suggesting the structure seen in a sliced onion, and rising in the form of an arch where seen against the face of the cut (fig. 5). Each cane layer was composed of many pieces of flattened cane stalks crossing each other at right angles and forming a thickness of as much as 3 inches. None of these circular areas extended anywhere near the periphery of the mound, however. Some potsherds found on the terrace bore simple incised curved lines and some raylike figures.

Just 1 month later, when the writer arrived, nothing was to be seen of the former Great Mound which had once stood 80 feet high

and covered the better part of the block. Even the 5-foot level had been scraped down until not even the outlines of the base of the mound could be distinguished. Only here and there irregular patches and lines of cane broke the surface over an area extending some 160 feet in a northwest-southeast direction. A few sandy spots were discovered, in some places partly surrounded by the cane. This circumstance led to the belief that the absolute bottom of the mound might not yet have been reached, a surmise strengthened by the discovery that even after subtracting the total cubic contents actually removed from the theoretical estimate of the original contents a total of more than 75,000 cubic feet would remain, but spread about over a 300-foot square town block.

Remnants of five of the other mounds were seen, most of which were serving as foundations for houses in the town. Mound No. 1 (Beyer) is still used for a cemetery. Mound No. 7, in front of the Magnolia Hotel, affording an unobstructed view of the three rivers, was two-thirds gone, leaving a high, steep face fronting on Black River. From this point the bluff forms a steep escarpment around to Little River, and at its base quantities of potsherds bearing various incised designs were picked up from among the refuse of the town dump. Bone fragments also were found, which circumstance suggested that the bluff had been used as an ancient burying ground. Where the new highway cut through the embankment on the west side of the town there were likewise traces of pottery. These considerations taken together indicated that there might still be cause for further investigations of the Troyville group and resulted in the excavations of 1932 which form the subject of this report.

EXCAVATIONS IN 1931–32

Great Mound Site

METHODS AND OPERATIONS

Preliminary excavations were attempted for 4 days in November 1931, but heavy rains put a stop to further digging at this season. A portion of the cane layers, sloping at an angle of about 45°, was cleared in the northwest corner of the site and found to end at a point 116 feet from the corner of Willow and Second Streets. Traces of a fallen log were found along the edge of this cane layer. At the extreme southeast corner of the site was a patch of cane, 8 inches thick, lying almost flat on the surface, which contained by count 15 layers of flattened cane stalks, each crisscrossing the one beneath it. Below the cane were traces of wood and bark, and immediately adjoining to the south was a section of long slabs of woodlike boards, lying side by side, each 8 to 10 inches wide. They

measured more than 7 feet in length as they lay, but their upper ends had been shorn off by the action of the scrapers and it was not possible at this time to trace them down more than 3½ feet into the sticky wet mud and clay. Apparently they rested on a sharply inclined slope. Also on this slope just east of the cane patch a small piece of matting was found lying humped over a chunk of clay. It looked like a piece of a basket, possibly used for transporting the dirt used in building the mound, but it was so fragile that it could not be separated from the gummy clay which adhered to it, without serious damage, so it was merely photographed *in situ* (pl. 5, *a*). After 2 days of steady rain it was decided to fill in the excavations and wait for a more favorable time of year before resuming work.

Intensive excavations were begun the first week in September 1932 by the writer, assisted by his father, E. F. Walker, from the staff of the Southwest Museum, Los Angeles, Calif. A gang of from 6 to 8 Negro laborers was employed, and operations were carried on until the middle of November, broken only by heavy rains on four different days. Since the examination of this site required a somewhat different method of approach than that usually employed in the excavation of Indian mounds, a few words on the field methods used may be of interest. The trenching technique was necessary because there was no mound actually visible, not even the outlines of the area formerly occupied by it. The objects of the investigation were, first, to ascertain if possible the point of origin and purpose of the cane in the bottom of the mound, and second, to determine the outlines of the original mound itself. Through the courtesy of the bridge engineer's office, profiles of the mound were obtained, showing elevations prior and subsequent to its removal. Utilizing the same base and section lines, the block was laid off into 50-foot squares by means of transit, rod, and tape, and the position of the projecting cane layers charted on the field plan. These squares were again subdivided into 10-foot squares over the particular areas where digging was in progress, which were marked off by steel surveying pins used as reference points to determine the exact location of everything found within the square. As the work proceeded, unexpected complexities of structure were revealed which made it necessary to uncover portions of several adjoining small squares at the same time, when attempting to follow out features that appeared related. This required the preparation of not one but several ground plans, in cases where one layer of material had to be cleared away in order to discover what lay beneath it. These diagrams were then coordinated to produce the final ground plan (fig. 6) and the cross sections through the slope (fig. 7).

Following the method of the preceding season, the slope previously discovered was followed down until undisturbed sandy loam was reached at a depth of 6 feet below the surface,[16] and this was assumed

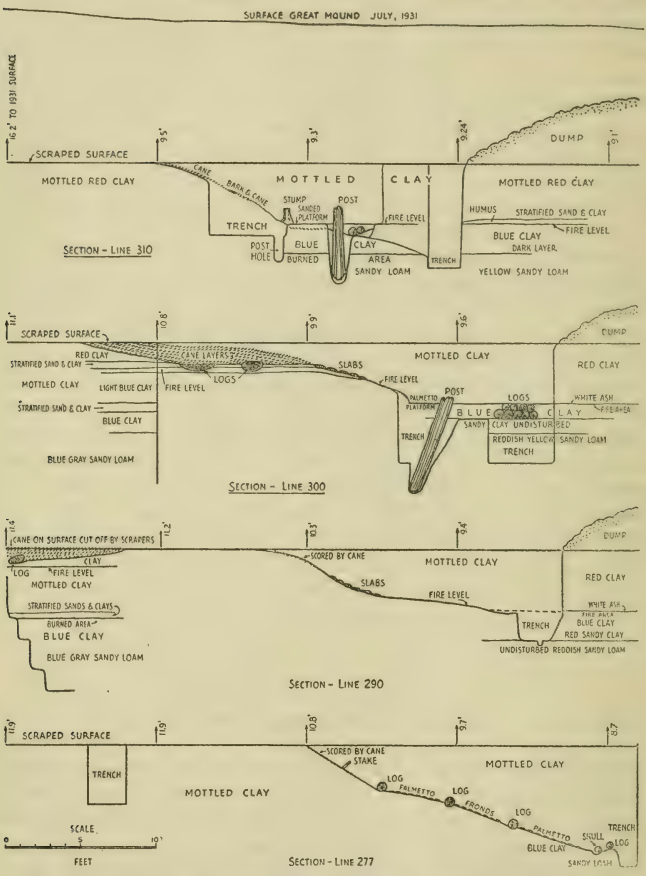
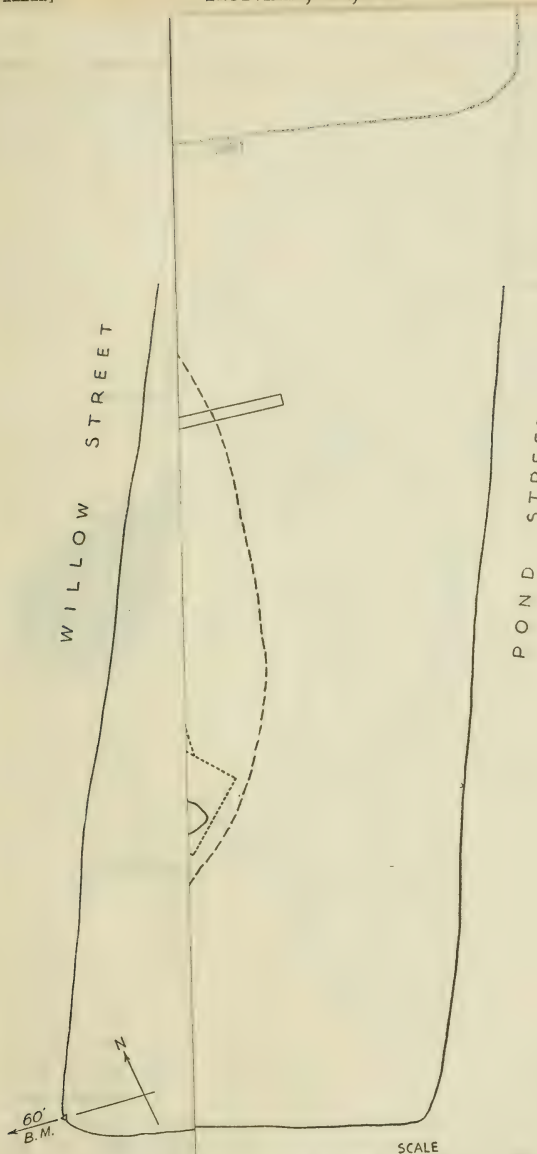


FIGURE 7.—Cross sections of slope of original mound in south pit.

to be the level upon which the mound was originally erected. The slope was then followed for some distance both east and west, resulting in the excavation of the large irregular-shaped pit seen in the

[16] The term "surface" as used in this report denotes the ground level remaining after the removal of the mound, unless otherwise specified.



28229—36 (Face p. 18)

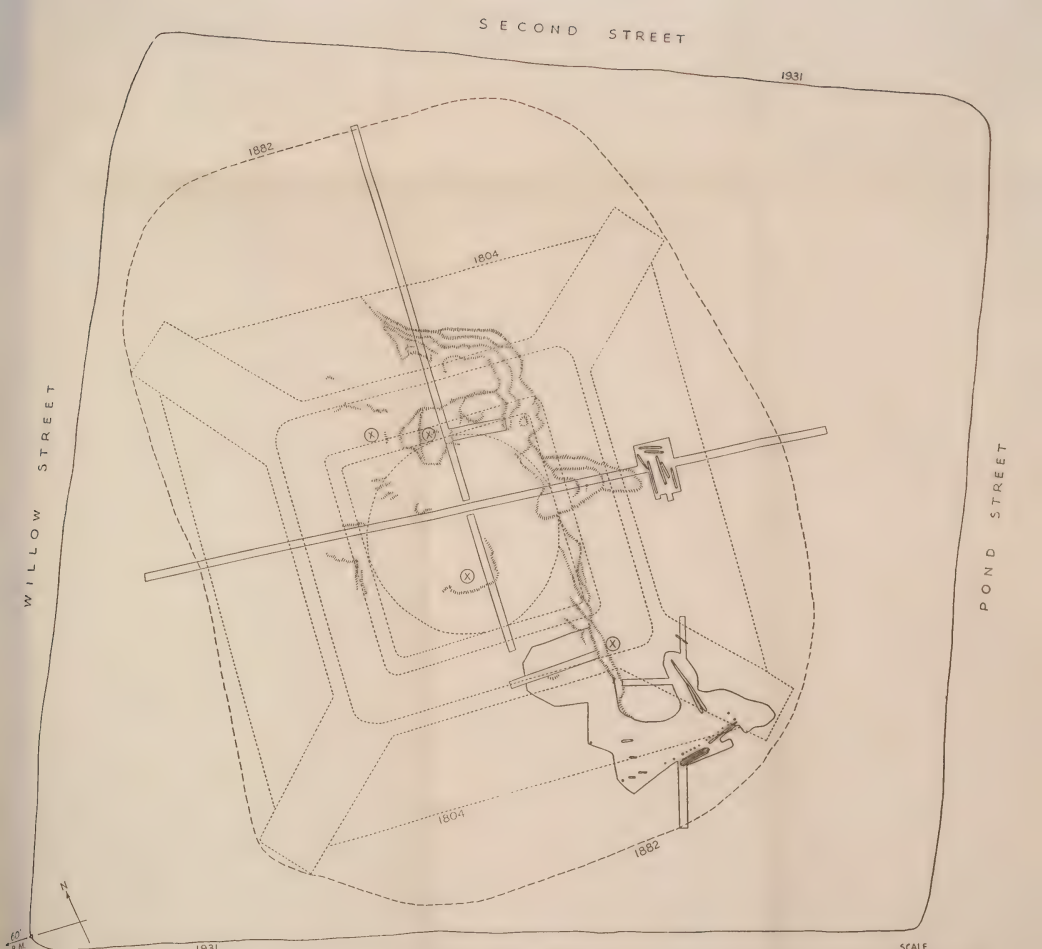


FIGURE 6.—Plan of excavations, Great Mound site.

28229—36 (Face p. 18)

southeast corner of the plan (fig. 8). Side trenches were also dug to determine if the margins of the Great Mound had actually been reached, and shorter trenches were cut into the interior of the original mound at likely places. Because of the toughness of the clay, which became softer and more tenacious toward the bottom, nearly

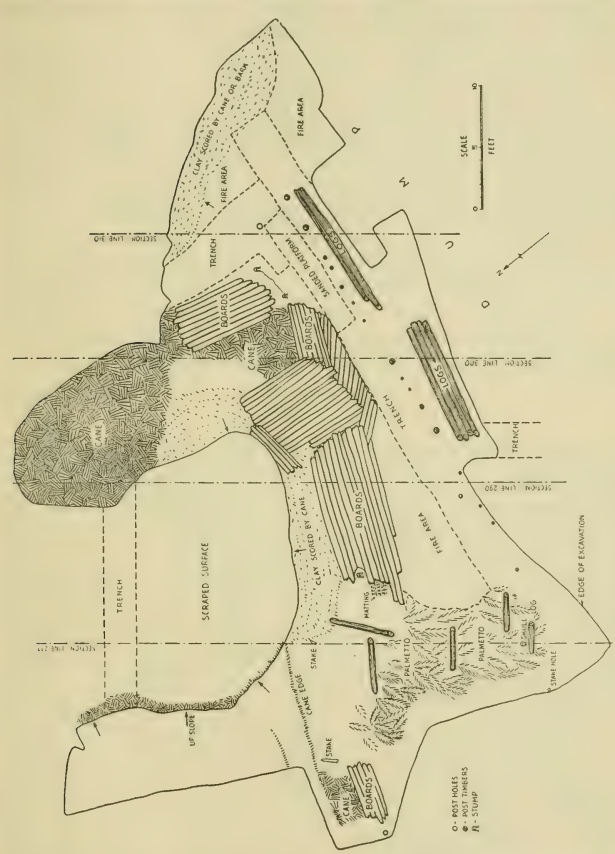


FIGURE 8.—Diagram of features of construction uncovered in south pit.

6 weeks were required on this part of the excavations before the contents of the slope could be satisfactorily exposed, sketched, and photographed.

The time remaining was spent in cutting two long trenches across the site, intersecting at what was assumed to be the center of the mound, at the same time cutting through the most complex part of

the pattern made by cane layers on the surface. These trenches, 245 feet east to west, 195 feet north to south, and 3 feet wide, were dug to undisturbed soil, which was found at varying depths of 5 to 6 feet. By this means reliable cross sections of the bottom of the mound were obtained, and also its limits at different periods in its history could be seen. When a hypothetical ground plan of the mound described by Dunbar was superimposed on the field plan it was found that the point of intersection of the cross trenches was close enough to the postulated center to have revealed the existence of any sepulchral chamber or other substructure, had anything of the kind been present. Short trenches were also dug through the two so-called "domes" for the same reason, but with no better results. Although it would have been desirable to have trenched the other corners of the hypothetical mound indicated by the plan, it was not possible to do so for reasons already explained. Nevertheless, enough was accomplished to warrant the belief of the excavators that but little more data could have been obtained from such effort. Too little of the mound remained after its destruction by the steam shovels to justify an assumption that all of the problems relating to its construction, purpose, and history could be solved.

STRUCTURE AND CONTENTS

Excavations at the southeast corner of the Great Mound site disclosed the existence of at least one inner original mound, on whose slopes numerous traces of charcoal, ash, bone fragments, and potsherds lead to the assumption of more than one building period for even the bottom 6 feet of the Great Mound. How many more periods ensued before it reached its maximum height of 80 feet must remain a matter of conjecture. On the western slope of the inner mound thick cane layers extended to the surface, where the action of the steam shovels prevented tracing them farther. But unless the shallow cane patch first uncovered, on the opposite slope, represents a continuation of this same sheet or layer, no other corresponding descending layer was found. This patch, composed solidly of cane, filled a small hollow to the depth of 8 inches and beneath it were two logs. The logs lay lengthwise in the hollow in a north-south direction, apparently so closely joined at the upper ends that they were at first thought to be parts of the same trunk, but this was disproven when the larger was seen to be a split log slightly hollowed and pointed at the upper end, while the other covered partly by it was a smaller but still rounded, complete trunk, including the butt. On the east side of the split log was a pointed stake braced against it at right angles. Other sticks were found beneath the upper end. The under sides of both logs were charred, and the

burned and blackened earth contained fragments of animal bones and a few mussel shells. A deep trench pit was sunk below all of this to determine if any stratification of material was present in this original mound. Reddish mottled clay formed the top layer and 6 to 8 inches below the surface was a stratum of sand and clay, evidently water borne. This immediately covered the upper fire level in which was the camp debris above mentioned. Below this was 2 feet of blue clay, then another water-borne stratum of sand and clay overlying a blackened level of darker blue clay. Unlike the upper fire level, this lower one showed no trace of human occupancy, only the charred remains of twigs and grass roots and a few scorched but unbroken small animal bones, and a discoloration of the soil to a depth of several inches. Because this condition clearly indicated a conflagration of considerable intensity and extent, this stratum was designated merely as the "burned area" in contrast to the upper "fire level." Below the burned area the blue clay extended for 12 or 14 inches and then gave place to blue sandy loam. As the trench pit was dug to a depth of 9 feet below the surface, and no indication of human activity occurred lower than the burned area, this was taken to be the original ground level on which the mound was built, 4½ feet below the present surface at this point.

Adjoining the patch of cane but farther down the slope were the long boardlike slabs, 7 feet or more long, one-half to 1½ inches thick, and 4 to 10 inches wide (pl. 3). They were laid close together lengthwise up the slope, immediately east and west of that portion of cane which covered the two logs. South of this area were other planks, lying sidewise on the slope, in part covered by those lying lengthwise. The former extended westward along the slope some 20 feet, although in places nothing but their imprints were left in the underlying clay. At their western limit a surprising feature was found. Extending up the slope at intervals of a few feet were four logs lying in a horizontal position, with the intervening spaces filled with a matting of grass and fibers which were found to be palmetto fronds. At right angles to the east of them lay another log on the slope. A stake was found driven in at a sharp angle on the steepest part of the slope above the uppermost log and from there to the surface there was nothing to be seen but the scoring of cane stalks in the clay. The lowest log was at the foot of the slope, not more than a foot above undisturbed sandy loam which here was reached 8 feet below the surface. Less than 3 feet away was a large stake hole in the mud, but the stake itself had rotted away. Beneath this log a few inches away was a human skull lying crushed laterally into the blue mud which covered the sandy loam floor of the mound.

Nothing but the calvarium was present; face, lower jaw, and all other bones of the skeleton were missing. This is the only instance of human remains found in place at the bottom of the mound, but it lends credence to the reports that human bones were found higher up in the mound during its removal.

This part of the slope with the logs on it has the appearance of a ramp with a stepped approach, as it ascends with an easy grade of not more than 30° to the surface, where it has been cut off by the scrapers. That this explanation is not improbable is seen by comparison with the description of the dwelling of the chief of Ossachile, probably a town in southern Georgia, by Garcilaso,[17] the historian of the De Soto expedition:

> The Indians endeavor to place their towns upon elevated places. But because in Florida, they rarely meet with this sort of place where they can find the necessary conveniences to build, they raise themselves eminences in this manner. They choose a place where they bring a quantity of earth which they elevate into a kind of platform, two or three pikes high; the top of which is capable of containing ten or twelve or fifteen or twenty houses to lodge the cacique with his family and all his retinue. They then trace, at the bottom of this elevation, a square place conformable to the extent of the village which they would make, and around this place the most important persons build their dwellings. The common people lodge in the same manner; and thus they all environ the house of their chief. In order to ascend to it they draw, in a straight line, streets from top to bottom; each one fifteen or twenty feet wide, and unite them to each other with large posts, which enter very deep into the earth and which serve for walls to those streets. Then they make the stairs with strong beams which they put across, and which they square and join in order that the work may be more even. The steps of these stairs are seven or eight feet wide; so that horses ascend and descend them without difficulty. However, the Indians steepen all the other sides of the platform, with the exceptions of the stairs, so that they cannot ascend to it; and the dwelling of the chief is sufficiently strong.

At the eastern end the slope was steeper, especially at the lower edge of the boards, where it dropped down abruptly to a kind of platform shelf built also of clay but with a level surface over which 2 inches of reddish-yellow sand had been spread. The platform, 2 feet wide, extended for a distance of 12 feet east and west, and at its outer edge a line of posts was discovered, many of them still firmly in place with their butts sunk several feet down into the sandy loam. These posts, of which there were 7 placed along the platform edge, were found to be part of an alinement of 15 stretching for 40 feet along the base of the slope in an almost due east-west line (pl. 4, *b*). Both hard and soft woods were used for the posts, which ranged from a few inches to more than a foot in diameter. The longest upright post found measured 6 feet, but others may have been of greater length, as nearly all of the tops and many of the

[17] Garcilaso de la Vega, 1881, p. 300.

butts had rotted away. Inspection of such as remained, however, showed that the ends had been crudely hacked off by some blunt-edged tool, presumably a stone ax. The posts were set apart at irregular intervals up to as much as 3 feet, although there were two by the platform within a foot of each other. Lengthwise to the platform but on the outer side of the posts were uncovered two logs about 11 feet long, which did not, however, lie directly against the posts. Each post had been set into a good-sized hole and tamped down with a mottled clay of different appearance from the light-blue clay which formed the platform and slope of this original mound.

Just above the platform on the slope, growing out of the upper fire level which contained plentiful evidences of camp-site refuse, were two small twin stumps of the bitter pecan tree. Their tops had evidently been cut and burned off before the building of the mound was resumed, as the ends of the boards rested directly on the western stump. This fire level is the same one in which the two logs in the hollow were lying, and it practically covered the whole slope down to the platform. But the platform itself covered over the fire level with several inches of clay over which the sand was spread, and the posts and outer two logs as well had been intruded through the fire level, which reappeared unmistakably beyond the logs, 4 feet below the surface. At a depth of 6 feet the lower burned area was encountered, also broken through by the line of posts. Beneath the two outside logs was a slope bearing a smooth shiny surface which reached undisturbed sandy loam 6 feet beyond the post alinement and about the same depth from the surface. This clearly marked the starting point for the construction of the mound, as the lower burned area, probably due to the burning of the grass and cane over the location chosen for the building of the mound,[18] did not extend south of this line. The upper fire level, on the contrary, was found continuously at a depth of 4 feet throughout the length of a trench cut to within 60 feet of Third Street to the south. The most plausible interpretation is that this fire level, indicated by lenses and pockets of ash, charcoal, and camp debris, marks the location of a camp site in existence at some time subsequent to the start of building operations, and it must have lasted long enough to permit the two pecans to have taken root and grown into small trees before building activity was again resumed.

Midway along the outer side of the alinement a pile of nine logs was found lying lengthwise nearly east and west (pl. 4, *a*). They had been cut and trimmed at both ends, which were of approximately

[18] The Natchez used this method of preparing fields for cultivation, according to Du Pratz. Swanton, 1911, p. 75.

the same diameter, unlike the logs used for posts whose butts were invariably larger than their tops, none of which were left intact. As in the case of the other 2 logs, these 9 also had been laid in place by digging away part of the fire level, for nowhere did this deposit touch either the logs or the posts, although it was present on both sides of them. But beyond the log pile there remained only the single fire level, thus proving that the logs were laid at the very base of the original mound slope. Underneath them were bits of crushed cane in the blue clay.

The large post at the eastern end of the line was apparently a corner timber, as it was larger than any of the others and no more posts or holes were found beyond it to the east or south, although there was one hole 3 feet north of it. A trench continued in this northward direction failed to reveal any more holes, but did disclose the fact that the slope at the eastern end of the excavation was not continuous with the western section and the cane and bark uncovered on it was oriented in a different direction from the other section. Of this bark that overlay the cane layers little more than dust remained, and beneath the cane was the ever-present fire level with its typical camp-site debris.

The only other feature of interest at this corner of the site was the presence of pieces of finely woven matting at two points on the south slope. These fragments, illustrated in plate 5, *a*, *b*, were at first thought to be parts of baskets used for transporting the loads of clay used in the construction of the mound. But the fragile nature of the specimens, which were woven with delicate strips of cane in a simple one-over-one-under pattern producing a rather open mesh, precluded the possibility of having been put to such rough use. It is more likely that they were broken pieces of discarded baskets such as those used for winnowing and sifting by the Choctaw and other historic southern tribes, and that these fragments were accidentally included with the dirt which went into the building of the mound.

No basket-load impressions were seen anywhere in the mound, hence the supposition is that the clay was carried in skins and dumped into place, then packed down by the hands or feet or with clubs. Shortly after a fresh cut in the clay was exposed to the sun and air it was noticed that it began to crack open along definite lines of cleavage. By taking advantage of this situation it was possible to remove large irregular sized chunks of clay, which presumably represented the original loads dumped into place. Well-defined slopes were encountered in some places, which may have indicated the limits of the accumulation heaped up during a certain limited period and allowed to receive a thin film of dust or dirt before being covered in turn by succeeding loads of clay. None of these features

of construction, however, were sufficiently distinct to permit a positive statement as to the time actually involved.

When three sides of the original mound had been uncovered, a trench was cut across it from east to west which revealed nothing more than various colored clays in its interior. To the northwest of it another rounded eminence was found, which was designated as "south dome", because of the domelike appearance of the cane laid over it east and west (pl. 6). Only a small portion of the top had been cut away by the scrapers, so it was possible here to trace the course of the cane layers more completely than anywhere else on the site. The outer covering consisted of only a few thicknesses of cane overlying an irregular lens of sand as much as 14 inches deep in places. The sand covered an uneven layer of blue clay which gave place to red clay at the eastern side of the dome. At a depth of 20 inches below the surface the blue clay was separated into an upper and a lower section by another thin cane layer. The lower clay stratum rested on a solid bed of cane 20 to 22 inches thick, overlying the general burned area, found everywhere at the bottom of the Great Mound. Trenching through the center of the dome from east to west disclosed no substructure of any kind, but the cross section showed a curious bifurcation of the cane at the western side (fig. 9). This was the origin of the two upper sheets which extended over and through the dome. At the eastern side the thick bed of cane found on the floor ascended to the surface on the slope of the adjoining mound whose top was cut off, so that it was not possible to follow it farther.

The excavations at this time had uncovered the south slope of the original mound down to its base and had cut into the interior of both this and the south dome adjoining it without furnishing any satisfactory explanation for the presence of the cane layers, so attention was next centered on the attempt to find the other borders of the Great Mound. This necessitated the digging of two long cross trenches, east and west, north and south, across the site. In the eastern half of the central cross trench there was uncovered a cluster of logs which at first glance appeared to form a definite arrangement, but further excavation showed that they were lying at different angles of inclination from only 5 to as much as 37 inches below the surface, and pointing in different directions. A level of twigs and trash and stratified sands at a depth of 31 inches suggests that these logs were disturbed from their original position by the action of water, possibly during one of those periodic inundations which even yet occur in spite of levees built to hold them out.

East of the log cluster the trench cut through a small hump of mottled reddish clay, which showed a fire line rising and falling on

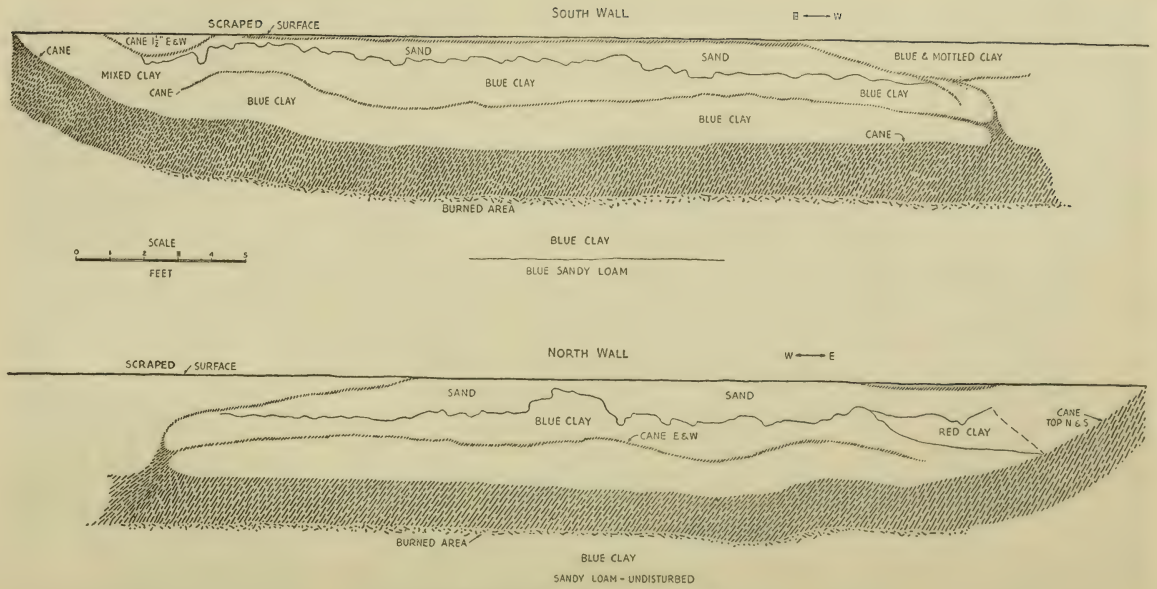


FIGURE 9.—Cross section of South Dome.

the other side. No other distinct eastern slope of the Great Mound could be found, although the trench was dug to within 65 feet of Pond Street. Test holes at the extreme end of the trench showed the same blue clay with its burned and blackened upper surface at a depth of 2½ feet. A possible explanation for this failure to find the true eastern slope may lie in the remark made by an oldtime resident of the town that a low ridge once joined the Great Mound with the one southeast of it across the street (mound 4), and the trench probably traversed the length of this causeway, no longer visible on the surface.

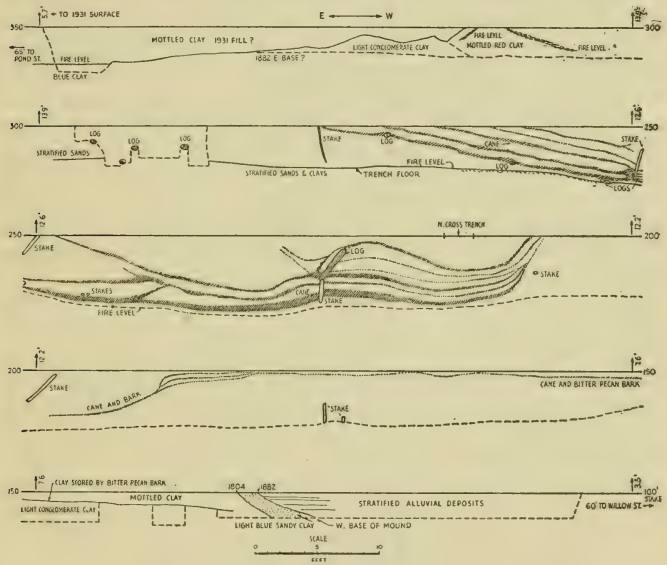


FIGURE 10.—Cross section through east-west trench.

The western edge of the Great Mound was not so difficult to discover. Its slope was clearly indicated by a sharply ascending incline against which were deposited horizontal strata of alluvial sands and silts, which extended to Willow Street, 60 feet west. These were due undoubtedly to flood waters around the base of the mound subsequent to its erection. The slope itself was composed of light blue sandy clay covering a darker interior mass of red mottled clay.

Where the trench cut through the intricate maze of cane layers appearing on the surface they were found to occur in a no less complicated arrangement in the bottom of the mound. The position and appearance of these cane layers can best be understood by referring to the diagram shown in figure 10. Logs and stakes were discovered

at certain points, serving either as supports for the cane or as pegs to hold it in place. Throughout its eastern half the trench was dug down to the burned area marking the bottom of the mound, and it was seen that this original ground surface was not entirely even, yet where the bottom lay at the greatest depth from the surface, 5½ to 6 feet, the cane layers were also the thickest and most numerous (cf. Explorations and Field Work of the Smithsonian Institution in 1932, p. 78, fig. 80). But no satisfactory evidence was found to explain the undulating appearance of the layers or their division into branches from a common layer, or the sudden attenuation and complete disappearance of a layer which was thick at one place and thin at another. Those in the eastern half of the trench have a definite synclinal trend, whereas the thin line of bark and cane which is all that is seen in the western half manifests itself as a gentle anticline. Two stakes found under the middle of this low flat-topped elevation seemed to be unrelated to anything else in this section. Potsherds found in the clay beneath and between the cane layers in the eastern part of the trench were similar to those from the fire level of the original inner mound and different from sherds from the western part, believed to represent an outer addition which formed the final Great Mound. Another fragment of matting was also discovered in this trench.

Figure 11 is a diagram section of the north trench. Here the cane layers were limited to the southern end of the trench, and beyond them was only red mottled clay extending nearly to the north end, where another blue sandy clay slope with stratified sands and clays impinging on it indicated the extreme northern limit of the Great Mound. This was within 30 feet of Second Street. Other dark lines inclining toward the south presumably indicate the margins of the mound at other periods in its history when the material from the summit cone was spread down the sides, principally on the north and south slopes, as mentioned during the Civil War, the time of Palmer's visit in 1883, and subsequently.

One other side trench off the north trench was dug through an area designated as "North Dome", where the cane layers exhibited the greatest degree of complexity. The internal structure appeared as shown in figure 12. A large stump was found on the original ground level 6 feet below the present surface. This stump bore indications of having been cut and burned prior to the raising of the mound. Two logs were found crossing one another through the cane for no apparent reason, but several of the stakes clearly were meant to hold in place the cane layers through which they passed (pls. 7; 8, *b*). Immediately north of this trench pit the layers were composed of finer strips known as "whip canes", assuming almost a vertical angle where they broke through the surface.

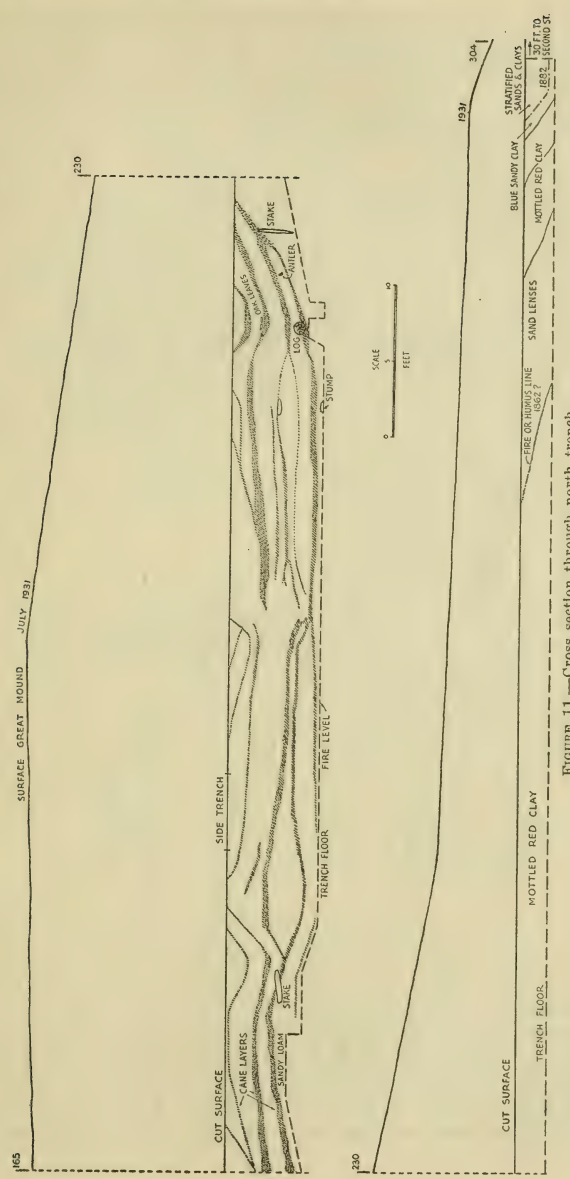


FIGURE 11.—Cross section through north trench.

The south-central trench was not completed at the time work was stopped on the site. At its northern end it cut into a large sandy area bordering which was one layer of cane. This area probably formed part of another dome similar to the south dome already described. The approximate location of the four circular areas,

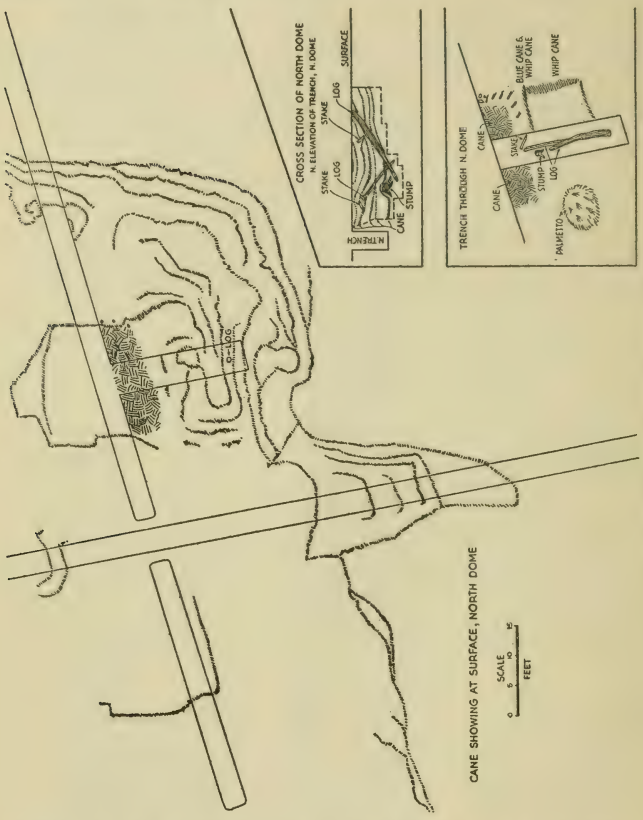


FIGURE 12.—Cross section of North Dome.

observed by Dr. Howe during the stage when a shelf 5 feet above the present surface was all that remained of the south half of the Great Mound, is shown by the small circled crosses on the plan (fig. 6).

With the extreme western and northern limits of the Great Mound established, it was possible to lay off its outlines as it appeared in 1883, 180 feet wide and 270 feet long. By further delimiting this

area to include only the portion occupied by the cane it was found that it could all be enclosed in a 180-foot square, the dimensions of the mound as observed in 1804. A close agreement between the south slope of the original mound uncovered at the southeast corner of the site and the south side of this hypothetical square ground plan is thus apparent, but complete excavation of this entire outline would be necessary in order to confirm their absolute identity. In all probability the actual original outline would be found to be much less of a perfect square than the one postulated, but the existence of a stepped approach at or near the southern corner of the mound tends to confirm Dunbar's casual remark about "the kind of abutment or projection seen at each angle." Even in his time, undoubtedly, the layers of cane on the slope were hidden from sight by the talus in which was growing the thick canebrake, through which he forced his way with much difficulty to the top.

The mottled clays dug away during the excavations can then be satisfactorily explained as the accumulation of material removed from the summit during the Civil War and at later intervals, and spread down the sides until this south slope became covered by more than 10 feet of detritus at the time of the final demolition in 1931.

Enete Mound

Excavations were also carried on at four other sites in the vicinity of the Great Mound, all being constituent parts of the whole Troyville group. Beyer in 1896 dug into a mound shown as No. 2 on his plan. (See fig. 4.) At that time much of it still occupied the middle of Mound Street, so named from this circumstance, but a portion of it was fenced off as private property and had supplied considerable soil for garden purposes. By sinking a shaft down from the top, hard, greasy clay was encountered for the first 3 feet before reaching sand. One skeleton was found resting on this sand, covered by clay. There were no objects associated with it, but removal of the top soil elsewhere over the mound yielded more bones and decorated pottery.[19]

Other excavations were reported made in this mound about 20 years ago and some pottery removed. But no written record of this work has as yet come to light. When seen in 1932 the mound was hardly one-third of its former size, all of the section out in the street having been cut away and leveled. Most of what remained was situated on the property of Dr. C. E. Enete, of Jonesville, who kindly granted permission for further investigation of it. The cut face along the sidewalk measured 75 feet in length and 6 feet in height.

[19] Beyer, 1896, p. 31.

Thomas' description of his Mound 6, whose dimensions he gives as 90 by 75 feet, seems to be corroborated by the latest findings, but there is a discrepancy of 9 feet in the height between the time of his statement and the present. Going back still further to 1804 it is even more difficult to reconcile either of these later measurements with Dunbar's estimate of 20 feet high and 100 by 300 feet at the top for each of the four large mounds surrounding the Great Mound, yet this mound was apparently one of the four.

Clearing the steep face of the cut made possible a good vertical section of the mound, 8.5 feet deep, which gave the following results: 2.2 feet, gumbo clay; 3.3 feet, yellow gray sandy loam, with charcoal in it; 1.8 feet, alternate light and dark strata, indicating successive overflows; fire level overlying yellow sand. A trench 20 feet wide, started well outside the base of the mound and dug toward the central crest, failed to yield any new information. Some potsherds were found but no skeletal material, so that the bulk of evidence points to this as having been used primarily as a dwelling site, in which later a few interments were made.

Bluff Mound and Burial Site

Preliminary survey of this part of the Troyville group where the high bluff fronted on the confluence of Little and Black Rivers indicated a greater profusion of surface potsherds than anywhere else, which suggested that the principal cemetery of the ancient town was located at that place. The mound itself (No. 7) being built at such a commanding point on the bluff where it overlooked the mouths of the three rivers, it can hardly be doubted that it served as a lookout station to warn of the approach of hostile canoes from any of those directions. High water and intentional grading down had left only a remnant of this mound, shown in plate 8, *a*.

Clearing the steep face of the trash and grass which covered it revealed near the base a distinct layer of camp-site debris, including bones and potsherds, which continued around the bend in the bluff. But the bluff slope itself showed two such levels, clearly the source of the sherds and bone fragments scattered over the slope below. Unfortunately the owner of this most promising piece of land could not be reached, so no digging was done there, but the owner of the adjoining property on which stands the hotel was eager to have his part of the site investigated. Taking advantage of this offer, a trench pit was dug on top of the bluff at the north edge of the mound. No burials were found, but a good idea of the soil stratification of the bluff was obtained. It consisted of 0.5 foot overflow silt; 1.5 feet gray clay; 1.3 feet bluish sandy clay; 1.2 feet reddish clay; 0.6 foot light sand; 0.5 foot dark clay, overlying a fire level

several inches thick containing camp-site debris. Undisturbed earth was reached at 7.5 feet.

Another attempt was made farther along the bluff at the end of Mound Street which yielded better results. At this point a bridge

FIGURE 13.—Diagram of bluff burial ground.

formerly crossed Little River, connecting Jonesville and Trinity, but due to high water in this stream a few years ago the south bank began to cave back so rapidly that the supports for the bridge at the Jonesville end were undermined and it collapsed into the torrent. During the caving away of great areas of this bank human skeletons

were exposed at several places, and it seemed more than likely that there might be others still undisturbed. A small plot of ground on the brink of the bluff almost at the bridgehead was selected and digging commenced. It resulted in the discovery of three groups of burials, comprising altogether 12 individuals. A diagram of this burial ground appears in figure 13.

Burial No. 1, a young individual, lay close to the edge of the bluff, extended full length on the back. It measured 5 feet, in situ, head to the southeast, only a few inches below the surface. The skull had been badly crushed and scattered about, presumably as the result of having been removed and then thrown back upside down, and not enough fragments remained to make possible any careful study of it. A pronounced curvature of the spine was noticed, but this, too, may have been due to post-mortem dislocation, and the bones were not in good enough state of preservation to permit their removal. No artifacts were associated with this burial, but about 14 inches from the head was a large mass of clamshells, and several feet away toward the fence was found a fine celt of a hard, fine-grained bluish stone flecked with white spots. Another celt found along the same part of the bluff was donated by the finder, Mr. Willard. One other object of interest discovered only 6 inches below the surface was a spherical ball of lead, probably a relic of the skirmish with the Federal gunboats in 1863.

Burial No. 2 consisted of two adults, lying next to each other, one at full length on the back, the other on its right side with back to the first. Both measured about 5 feet 6 inches as they lay, heads toward the northeast. Like the first burial, the skulls of both these skeletons were crushed beyond recognition, probably as the result of post-mortem causes due to being only 18 inches below the surface. There were no associated artifacts, with the exception of a tiny notched and stemmed arrow point lying with its tip almost touching the right knee of the skeleton. From its position when found it may very readily have been embedded in the flesh, although it had failed to penetrate the bone. The dirt covering these bodies contained quantities of potsherds, bone fragments, charcoal, ash, and other camp debris, but no more than a few pieces of pottery belonging to the same vessel.

Burial No. 3 contained a mass of nine skeletons, representing infants and adults of both sexes and varying ages (pl. 2, *b*). They had been piled over and beside one another indiscriminately, care having been taken only to extend the bodies full length, all heads to the north. Although all of the skulls were crushed out of shape, those farthest from the edge of the bluff, and consequently protected by a few inches more of dirt over them, were in better condition than

the others, thus strengthening the theory that post-mortem causes were responsible for their battered appearance. The skeletons lay from 20 to 24 inches below the surface on sandy loam which appeared to be the original ground level. They represented apparently 4 males, 2 females, and 3 infants, ranging in length, as they lay, from 5 to 6 feet. Teeth of all adults were in good condition, though much worn down in some cases. No pathological deformities of any of the bones could be observed, and there were no artifacts with this multiple burial, which, like the others, was covered only by a few inches of dirt taken from the camp site with its typical refuse.

Unfortunately it was not possible to remove any of the bones for study, owing to the intense and insatiable curiosity aroused in the local populace by the discovery. Not content with flocking around the site in such numbers during the day that they seriously interfered with the work of the excavators, they returned to the scene under cover of nightfall, tore off the coverings placed to protect the skeletons, and committed such acts of vandalism that the owners of the ground felt obliged to put a stop to the nuisance by requiring all work to be stopped immediately and the bones to be covered over as before. Time was allowed only to take a few photographs of the burials.

More extensive excavations would have been desirable, as the burial ground undoubtedly stretched along the bluff for several hundred yards in either direction, yet it is doubtful how much more light such effort could have shed on the aborigines who built the mounds. Positive evidence linking the individuals buried on the bluff with the builders of the Great Mound is lacking, as no whole pottery of the specific type characteristic of the bottom of the mound was found with the burials, although there were loose sherds of this type in the dirt along with many others.

Embankment and Terminal Mound

The long ridge enclosing two sides of the town is what remains of the ancient embankment seen by Dunbar and Hunter. They give very little description of it beyond mentioning that it was in the form of a glacis within and nearly perpendicular on the outside. This suggests its use as a rampart for purposes of fortification, especially when account is taken of the deep ditch or moat on the outer side. But it is also possible that it served another purpose, as it does today, that of a protection levee against backwaters creeping up on the town. A cursory examination of it showed plentiful indications of pottery on its surface, principally near the bend at the western corner. Where the new highway cut through the ridge large potsherds were uncovered, differing decidedly in design

from those dug out of the interior of the Great Mound. There were also present certain widenings along the crest which might at one time have been small mounds incorporated into the embankment to serve as platforms similar to those found by Fowke in the wall enclosing the Marksville earthworks.[20]

Two exploration trenches were cut through the embankment at points where it was thought there had been the least disturbance of the original earthwork. These it was hoped would disclose the presence of any post holes which might have once formed the line of a stockade guarding the crest of the ridge. But the evidence on this point was mainly negative, as what small holes were found were made by stakes and fence posts set up recently. This does not necessarily preclude the possibility of a stockade having once existed there, as the removal of a comparatively small amount of earth from the top would have sufficed to have effectively destroyed all trace of such a palisade. But the nature of the soil and its contents left little doubt of the aboriginal origin of the earthwork.

In trench No. 1, cut across the part of the embankment separating the slough from the bayou proper, the section showed that the greater part of the ridge had been built of a light yellow sandy clay overlying a darker, heavier clay. There were traces of bones and shells in the floor of the trench, which directly below the crest was 6.8 feet. Even a slight remnant of the glacis or banquette could be seen (fig. 14).

Trench No. 2 was dug farther west, along a due east-west line, across a wider part of the embankment. It reached floor level 6 feet below the summit, but the profile showed a more rounded and gentle slope (fig. 14). Below the top layer of reddish-yellow sandy loam was a distinct band of dark clay, then more sandy loam, turning to brown at the bottom. At the western end of the trench a thin stratum of black clay was interposed between the sandy loam floor and the upper band of clay. Potsherds were more plentiful throughout this trench, indicating that the dirt had been carried presumably from nearby camp sites. The few holes exposed in the trench were considered to be due to burrowing animals or the decayed roots of trees. They did not show any resemblance to the line of a stockade.

The Black River terminus of the embankment is a mound (No. 9), but as it was occupied by several buildings it was not a suitable site for excavation. Beyer dug a little in this ridge mound and reports finding modern crockery and a curious effigy-head pipe which he regards as certainly intrusive. This is the only clue to the presence of historic Indians at the Troyville site.[21]

[20] Fowke, 1928, pl. 64. (Cf. Barrett, 1933.)
[21] Beyer, 1896, pl. XIV, fig. 2.

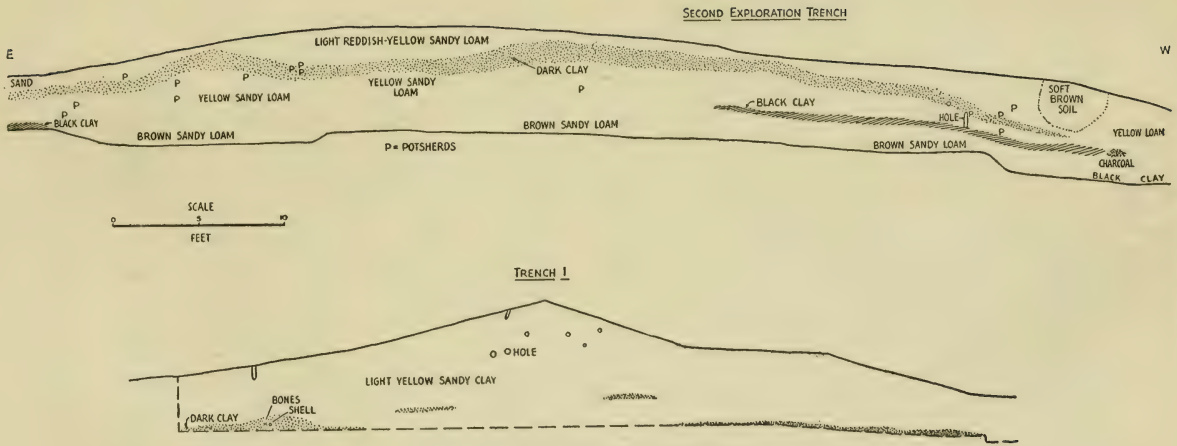


FIGURE 14.—Cross sections of embankment.

MATERIAL CULTURE

Animal Remains

Contrary to what might have been expected from the quantity of split and broken bone fragments recovered from the camp-fire refuse, the actual number of animal species represented is surprisingly small. Bear (*Euarctos luteolus*), deer (*Odocoileus virginianus louisianae*), and gray squirrel (*Sciurus carolinensis fuliginosus*) comprised the mammals, and of these the bones of the deer were the most numerous. There were two species of turtles; the snapping turtle (*Chelydra serpentina*) and the soft-shelled turtle (*Amyda* sp.). Ducks and wild turkeys comprised the avian fauna. Among the fishes, bones of the catfish (*Ameiurus* sp.), drumfish (*Aplodinotus grunniens*), and alligator gar (*Lepisosteus tristoechus*) have been identified, and the tooth of a shark. Scales of the gar were used widely by the southern Indians as projectile points or inserts for weapons, according to Du Pratz,[22] and the writer found evidence that these scales were copied in the form of tiny flint points by the Indians living along Red River in Natchitoches Parish.[23] But at the Troyville site they were found burned and blackened along with other refuse from the aboriginal cooking fires. A few fresh-water clam and mussel shells were present, but not in abundance, and one small gastropod shell broken to bits. It is worthy of note that no bones of the dog or buffalo occurred in the deposits.

Identification of these bone fragments is due to the courtesy of the following staff members of the United States National Museum: Dr. A. Wetmore, Mr. H. H. Shamel, Dr. D. M. Cochran, and Mr. E. D. Reid.

Plant Substances

In the soil from the fire level at the bottom of the Great Mound along with the bones and pottery fragments were many traces of seeds, leaves, stems, etc., of a great variety of vegetable substances. In order to determine what species were present and which ones were edible this material was sent to Dr. W. L. McAtee, Chief of the Division of Food Habits Research, Bureau of Biological Survey, United States Department of Agriculture, and the following identifications were made by Mr. A. C. Martin:

Cattail—*Typha (latifolia?)*.
Grass—*Panicum* sp.
Grass—*Syntherisma sanguinale*.
Sedge—*Cyperus* sp.
Sedge—*Carex frankii*.
Sedge—*Carex* sp.
Oak—*Quercus* sp.
Dock—*Rumex* sp.

[22] Swanton, 1911, p. 58.

[23] Walker, W. M., A Caddo Burial site at Natchitoches, La. Smithson, Misc. Colls., vol. 94, no. 14.

Smartweed—*Polygonum* sp.
Lambsquarters—*Chenopodium* (*album*?).
Lambsquarters—*Chenopodium* sp.
Pigweed—*Amaranthus* sp.
Pokeweed—*Phytolacca decandra.*
Carpetweed—*Mollugo verticillata.*
Pussley—*Portulaca* sp.
Peppergrass—*Lepidium* sp.
Dewberry—*Rubus* (*hispidus*?).
Honeylocust—*Gleditsia* (*triacanthos*?).
Sorrel—*Oxalis* sp.
Spurge—*Euphorbia* (*preslii*?).
Spurge—*Euphorbia* sp.
Grape—*Vitis* (*cordifolia*?).
Grape—*Vitis* sp.
Violet—*Viola* sp.
Passionflower—*Passiflora incarnata.*
Primrose-willow—*Jussiaea* (*leptocarpa*?).
Hercules-club—*Aralia spinosa.*
Verbena—*Verbena* (*urticaefolia*?)
Nightshade—*Solanum* sp.
Buttonweed—*Diodia virginiana.*
Cleavers—*Galium* sp.
Elderberry—*Sambucus canadensis.*
Gourd—*Cucurbita pepo.*
Ragweed—*Ambrosia artemisiaefolia.*
Clasping Coneflower—*Dracopis amplexicaulis.*
Yerba de Tajo—*Eclipta alba.*
Sneezeweed—*Helenium tenuifolium.*
Thistle—*Cirsium* sp.

Of these 38 species listed only the grapes, berries, gourd, and possibly the Nightshade and Passionflower are considered edible. The most striking omission, of course, is any mention of maize, but as the cache pits of the village were not located, nor the fields belonging to it, this does not necessarily prove that maize was not grown here.

Pottery

DESCRIPTION

No complete vessels were found anywhere at the Jonesville site during the excavations of 1932, and if any were discovered by earlier investigators they have not recorded the fact in print. So, the determination of ceramic types rests perforce on the study of potsherds picked up as surface finds at several different points over the site and those dug out of the bottom of the Great Mound. Even the term "surface finds" is likely to be in part misleading, because it refers to specimens from localities some of which are known to have been disturbed from their original condition by the building activities of the town. This circumstance makes it necessary to be extremely cautious in statements regarding the possible horizon from which a particular type of pottery has come. Nevertheless, the discovery in the bottom of the Great Mound of potsherds bearing certain distinctive design characteristics and the nonoccurrence at this level of other types found abundantly at the surface localities furnishes the basis for a division into at least two periods of probable occupancy, involving possibly several different tribes.

The ware, while not homogeneous in regard to texture, color, or hardness, is, nevertheless, composed of the same constituents of local gray and buffy clays and sands, and no shell or grit particles

have been found in the tempering. It is principally the proportion of sand in the clay which determines the appearance of the paste and the finish of the surface, producing the characteristic "sandy feel" of many of the sherds, particularly of those painted with a red wash or slip. For tempering material tiny particles of hard clay have been used, but whether or not these were the product of pulverizing older discarded sherds it is not possible to state with certainty. However, in the accompanying table (p. 45) the term "sherd" has been used for this type of tempering material in accordance with the practice of many recent archeological writers.

Undecorated potsherds comprise 46.1 percent of the collection, but this is not regarded as a particularly noteworthy criterion, in view of the fact that the ware is no different from that of the decorated specimens, and also because many of the plain sherds, which came presumably from the body of a vessel, are too small to indicate whether the same vessel might not have been decorated elsewhere, as around the neck, for example. So it is deemed sufficient in this report, for purposes of description, to group the characteristic pottery types according to styles of decoration alone. Guthe's method of ceramic description [24] has been followed with a few modifications, principally in regard to the categories relating to technique and design. As the technique employed often seems to have been the major factor in the style of decoration produced, it has been placed ahead of instead of after the subheading "Design." Illustrations of the several different types of pottery described are given in the plates.

In the accumulated debris of the fire level in the bottom of the Great Mound the prevailing type of pottery was that decorated in the style of the Hopewell pottery, with curvilinear bands or figures outlined by broad grooves, and adjoining areas uniformly roughened by means of the roulette or fine punctations. Setzler has recently described pottery of this kind found by Fowke in the mounds at Marksville, La., which he regards as comparable to Hopewell.[25] The sherds from the Troyville Mound differ in one important respect, namely, that instead of showing the characteristic crosshatching and line of bisected cones on the neck as seen on the Marksville specimens, the rims are plain with a tendency to flare outward. The paste is a gray or buff clay containing very little sand, tempered with conspicuous particles of "sherd." Its texture is medium fine, rather hard, and the surface color is dark gray, brown, or blackish, scraped and smoothed and rubbed to a shiny polish. Probably used for culinary purposes, the vessels are in the form of shallow sloping

[24] Guthe, 1927.
[25] Setzler, 1933.

bowls and plates with flat or rounded bottoms and a variety of medium thick rims ranging from straight to sloping, incurved, or flaring profiles. Some of them were evidently quadrilateral in shape. On none of the sherds is a complete design motif displayed intact, but among the many curvilinear figures present it is possible that the distinctive Hopewellian bird forms were represented. Other types of incised decoration include horizontal, vertical, and diagonal grooves, and a combination of curved grooves and small circular pits (pls. 9, *a*, *b;* 10). Noticeably absent from this, the lowest pottery-bearing level found in the Great Mound, were the following varieties common at all the surface sites: Cord-marked, painted, punctate, or " overhang " grooves.

Outside of the Great Mound, sherds were collected from seven other sites in its vicinity, viz: 1, The bluff burial ground; 2, the bluff surface at the point fronting on the two rivers; 3, the test pit on the bluff near the hotel; 4, the surface of the slope below the bluff; 5, the ash layer at the base of the bluff mound; 6, the embankment; 7, the Enete Mound (the Great Mound fire level is listed as No. 8 in the table). Examination of these sherds shows that the five principal categories of cord-marked, incised, impressed, painted, and punctate wares are represented in varying proportions at each of these sites. Reference to the table will indicate the occurrence of each type at the several sites. Next to the undecorated ware, that with incised designs of some sort is most numerously represented, totaling 19.6 percent of all the sherds gathered (pl. 11). Pottery bearing the same kind of incised grooved design as that from the bottom of the Great Mound was found at several of the surface sites, but without the evidence provided by stratification its significance cannot be ascertained. Other variations include fine lines and grooves, rim band lines with a row of scallops at the base, and unusual designs such as the dot-in-diamond (pl. 11, *i*), or concentric circular lines. A few specimens of the " overhang " type of parallel rim grooves found by Collins at the prehistoric Deasonville site in Mississippi [26] are also present at Jonesville. At both of these sites this type of ware is similar in composition, consisting of a coarse-textured grayish paste, tempered with pulverized sherds. But all the Jonesville pottery, as has been stated, possesses a variable amount of sand particles, which when present in large quantities give a sandy feel to the pottery and in consequence the surface is softer than that of the other variety from the same site, which has only traces of sand. The bowl and small jar fragments bearing incised decoration have medium thick walls with rounded, flat, flaring, or scalloped rims and either circular or square flat bottoms.

[26] Collins, 1932.

Painted pottery forms the third largest class present, comprising 16.1 percent of the total sherd collection. The paste used for this ware is light gray, buff, or even pinkish, and the texture is medium fine, due to the large amount of sand present and the small, fine particles of sherd used in the tempering. Much of it has a smooth sandy feel to the surface, which is generally buff in color, and over it an ochreous red paint has been applied as a slip or wash. Some of this pottery is red painted on both the inner and outer surfaces; in other specimens only one surface, the outer, is painted, or perhaps the rim alone. Although no decorative patterns can be made out, some sherds have the colored area limited to a broad band on the inside surface. A few vessel fragments have also a single incised line below the outward bulging rim, or an equally simple line decoration inside the rim. The red paint is a fugitive coloring matter, occurring in several shades from vermilion to turkey red, which is immediately soluble in water. Hence it is unlikely that these colored vessels were used as culinary containers, and as a matter of fact very few of them exhibit smoke-blackened exteriors. Painted pottery was conspicuously absent from the fire level in the bottom of the Great Mound, although a few sherds ornamented in this manner were found on the outer surface while the mound was in process of being leveled.

The impressed style of decoration was used for many small jars and bowls (pl. 12). In 7.6 percent of the potsherds it appears in two forms, both of which are ascribable to the same rocker technique, that of rolling a simple disc or a cogged wheel back and forth over the moist clay. The roulette variety is that associated with the Hopewell type pottery found in the bottom of the Great Mound, and it also occurs at several of the other sites. Moreover, it bears a striking resemblance to pottery found by McKern in the Trempealeau Mounds of Wisconsin.[27] The other variety, also characteristic of the Hopewell, that of closely compressed zigzags appearing in bands outlined in some instances by grooved lines, was also present in the Great Mound. A type of compressed zigzags unenclosed was found most plentifully at the burial site on the bluff and to a lesser degree at sites 3, 6, and 7. Other kinds of impressed decorations, such as check-stamped or paddle-marked designs, were not found at Jonesville.

The next pottery type to be considered (in order of its numerical importance, 6.8 percent) is designated as cord-marked, from its principal characteristic of fiber cord imprints on the exterior (pl. 13). Large jars and urns, made of a coarse gray paste heavily sherd tempered but containing little sand, were the principal kinds of vessels thus decorated. Impressions of netting fabrics as well as those

[27] McKern, 1931, pl. XLIV.

made by cord-wrapped sticks are present, distinguishable chiefly by the size and shape of the interstices left between the marks of the cords. Some of these jar rims carry an extra fillet of clay which has been allowed to project slightly to form a collar. This bears the marks also of cords or else is notched. A considerable number of fragments of a large cord-marked jar whose diameter measured approximately 9½ inches were found at the bluff burial site, but not in actual association with any of the burials. Positives made from the several different varieties of cord-marked sherds show a range of simple twisted fibers from coarse thick netting cords to fine slender strings. But there is no evidence of textile marked ware of the kind found in the so-called "salt-pans" of Tennessee as figured by Webb and Funkhouser.[28] No cord-marked ware of any kind was found in the bottom of the Great Mound, although pieces of it were picked up from the cut surface, and at all the other sites.

Punctate pottery is the smallest class represented (3.8 percent) and is divisible into two varieties: One characterized by a combination of deeply incised grooves and pits (pl. 14, *a*, *b*, *c*, *d*, *g*, *k*); the other having smaller punctations in bands or triangular areas outlined by fine incised lines. The indentations in the first variety take the form of circular pits, crescents, bisected cones, or elongate dashes, bordered by broad grooves. This type was found at several of the surface sites but not in the bottom of the Great Mound. The second variety, which is more typical of sites along the Gulf coast, was found only at sites 3, 4, and 7, at Jonesville (pl. 14, *e*, *f*, *h*, *i*, *j*). It is sherd and sand tempered but lacks the "sandy feel" of the other variety, and is also harder and less smooth surfaced. Only small fragments of vessels decorated in the punctate style were recovered, so that it is impossible to tell what design patterns were intended.

Additional features of surface decoration, such as handles or effigy heads on bowls, seem to be absent. One or two sherds bear a decoration made by pinching portions of the surface into small cup-like pits, and another has a single knob. But with the exception of two cylindrical-shaped objects of clay which might have been parts of broken dipper handles, nothing else resembling a handle was seen. A few notches on the rim form the only decoration on several sherds.

AREAL DISTRIBUTION

The historic seat of the Natchez Tribe was not distant more than 30 miles from the Troyville Mounds and this circumstance has led some historians to regard those Indians as the builders of all the

[28] Webb and Funkhouser, 1931, pls. 50–59.

mounds in this region, but the archeological evidence secured does not support this theory, as none of the potsherds found at Jonesville bear the scroll-and-disc design characteristic of the Natchez pottery. Yet possibly there is a similarity in the painted ware, as Du Pratz [29] mentions the beautiful red earthenware vessels made by the Natchez, colored with ochre obtained from a bluff known as "l'Encore Blanc," which is shown on the De Crenay map as located at the next bend south of Fort Rosalie on the Mississippi. This coloring matter was applied to the surface of the vessel before it was hardened and then dried over the fire, and it was finally rubbed to produce a good polish, if the specimens on display in the State Museum at Jackson, collected by M. B. Chambers from a mound on the Fatherland Plantation, are typical of this Natchez ware. However, none of the painted pottery found at Jonesville was thus polished.

[29] Swanton, 1911, p. 62.

TABLE 1.—*Characteristics of Jonesville pottery*

Type of ware	Site	Paste				Surface	
		Texture	Color	Temper	Hardness	Finish	Color
Incised:							
I	1, 2, 3, 4, 5, 6, 7, 8	Medium coarse	Gray	Sand and sherd	Hard	Medium smooth	Gray-brown.
II	1, 2, 3, 4, 5, 6	Medium fine	Buff	do	Medium soft to hard	Smooth sandy	Gray-buff.
Painted	1, 2, 3, 4, 6, 7	do	Buff, gray, pink	do	Medium soft	do	Buff.
Impressed:							
Roulette [1]	1, 2, 4, 5, 8	Fine	Gray-buff	do	do	do	Gray.
Zigzag:							
I	7, 8	do	Buff	do	do	do	Buff.
II	1, 3, 6, 7	Coarse	do	Sherd	Hard	Scraped	Brown.
Cord marked	1, 2, 3, 4, 5, 6, 7	do	Gray-blue	do	Medium hard	Rough	Light gray, buff.
Punctate:							
I	3, 4, 7	Fine	Gray	Sand and sherd	Hard	Smooth	Brown, buff.
II	1, 2, 3, 4, 6, 7	Medium coarse	do	do	Medium hard	Smooth sandy	Gray-buff.

Type of ware	Site	Decoration		Form		
		Technic	Design	Shape	Rim	Thickness
Incised:						
I	1, 2, 3, 4, 5, 6, 7, 8	Lines and grooves	Straight, diagonal, curved	Bowls	Round, scalloped, notched	Medium thick.
II	1, 2, 3, 4, 5, 6	Neck bands, lines	Straight, diagonal, curved, dot-in-diamond.	Bowls, jars	Punctate, flat	Do.
Painted	1, 2, 3, 4, 6, 7	Slipped	Fugitive red, wash	Bowls, plates	Round, incurved, flaring, flat.	Medium.
Impressed:						
Roulette [1]	1, 2, 4, 5, 8,	Rocked roulette	Filled areas	Bowls	Flat, enlarged	Medium thin to thick.
Zigzag:						
I	7, 8	Rocked cylinder	do	do	Rounded	Medium thick.
II	1, 3, 6, 7	do	Rim band, body	Jars	do	Thin to thick.
Cord marked	1, 2, 3, 4, 5, 6, 7	Paddle-marked	Crisscross, parallel line	do	Notched, grooved	Thick.
Punctate:						
I	3, 4, 7	Fine pits	Rim only	Bowls	Rounded, flat	Medium thin.
II	1, 2, 3, 4, 6, 7	Grooves and pits	Curved bands	do	Round, scalloped	Medium thick.

[1] Hopewell type.

In addition to the Natchez pottery, that of the Choctaw and Tunica have also been identified by the Mississippi workers. Collins found the decoration on the Choctaw pottery at the historic village site of Chickachae to consist of finely combed lines appearing as straight or curved bands,[30] and Ford and Chambers discovered that the Tunica ware had as its only form of decoration an encircling line and regular spaced notches on the rim.[31] There is a suggestion of this latter type also on some of the Jonesville specimens, but nothing resembling Choctaw pottery.

It is possible that pottery of an Avoyel or Taensa type may occur at Jonesville, but this awaits more definite knowledge of the specific ceramic style employed by these two tribes.

Pottery of the type known to have been manufactured by the Natchitoches-Ouachita division of the Caddo, although found farther up the same river, does not occur at Jonesville. It is characterized by elaborate scroll-and-spot designs engraved on highly polished surfaces sometimes filled in with red or white pigments. Pottery of this kind was accidentally discovered while plowing up the site of the historic Natchitoches Indian burial ground on Cane River[32] and found by the writer to be almost identical with the beautiful ware from Glendora and Keno Place described by Moore.[33]

Having thus practically eliminated the known historic tribes from consideration, there is apparently no alternative but to regard the Jonesville pottery as chiefly the work of prehistoric or at least protohistoric tribes. Collins has called attention to the fact that painted ware similar to that found at the prehistoric Deasonville site had also been found previously by Moore at sites west of the Mississippi extending from the St. Francis River valley in Arkansas south nearly to the Gulf, and that in many instances it was more or less closely associated with objects of unmistakable European origin, such as glass beads and brass ornaments.[34] This is sufficient to indicate that such painted ware persisted at least until protohistoric times at these particular sites, mentioned by Moore, and perhaps it will be found to bridge the gap between strictly prehistoric and historic times. Other analogies between the Jonesville and Deasonville potsherds occur in regard to the "overhang" type of incised parallel grooves described above, and also the cord-marked ware, but the latter has such a wide distribution over the whole Southeast that it does not furnish a very satisfactory criterion for comparison of local cultures.

[30] Collins, 1927, p. 261.
[31] Ford, J. A., Ms.
[32] Walker, 1932, p. 171.
[33] Moore, 1909, pp. 27–80.
[34] Collins, 1932, p. 18.

On the Louisiana side of the river more nearly homologous types to the Jonesville pottery can be seen at sites as far down Black River as the Larto Lake mounds, and even south of Red River at Marksville (pl. 15). Some of the same varieties are found westward up Little River, north for a short distance up the Ouachita, and eastward to the Mississippi.

Without a doubt the earliest type of ware occurring at Jonesville is that designated as Hopewell. This is quite similar to certain of the Marksville vessels, as has been stated, but differs just enough to warrant its being considered as a variant rather than as a typical form. The term "Troyville variant" of the Hopewell is therefore proposed in order to classify this pottery more exactly. The circumstances under which it was found indicate, however, that at this particular site it was certainly associated with a prehistoric people.

Artifacts

There is a decided paucity of the usual bone, stone, and flint implements at this site. Among numerous cannon bones of the deer found in the Great Mound fire level and in the trash fill over the burial ground only two specimens show definite modification for use as tools, probably as punching or piercing instruments. No awls, bodkins, beamers, or other bone articles were discovered.

Two celts, well fashioned of hard dark-grained stone, were found along the bluff edge near the burial ground. Modern Choctaw Indians living near Jena in La Salle Parish stated that similar tools were used by their tribe in older days for the purpose of fleshing animal hides. Two small plummets came from the Jonesville vicinity, one of which has one surface decidedly flattened. These artifacts are illustrated in plate 16, *b*.

No projectile points or chipped artifacts of any kind were present in the fire level in the bottom of the Great Mound. The ones shown in plate 16, *a*, all came from the other surface sites. The tiny point represented as *b* is the one that appeared to have penetrated the knee of the skeleton in burial No. 2.

The only pipe found at Jonesville is the one illustrated by Beyer in his plate XIV, fig 2.[35] It was made of clay of a greenish color and was found with a small brown teapot of recent manufacture, therefore the finder regards it as certainly intrusive and doubtfully of aboriginal workmanship. It came from mound 9 at the Black River end of the embankment.

Two other objects, hardly entitled to be called artifacts, were found in the Jonesville vicinity, although the exact provenience is not

[35] Beyer, 1896.

known. One was a chunk of galena crystals of the kind found native at Joplin, Mo. The other was a fragment of dark-colored slate bearing two intentional notches along one margin.

CONSTRUCTION MATERIALS

Clay

Samples of the clay found in different parts of the Great Mound were taken in order to compare them with the soils native to the vicinity and also to determine if the pottery had been manufactured from the same material or from some obtained from more distant unknown localities. These samples were submitted for analysis to Dr. A. G. McCall, Chief of Soil Investigations, Bureau of Chemistry and Soils, United States Department of Agriculture, and Mr. J. E. Lapham made the examination. He reports that the clay samples are similar in color, texture, and structural character to soils collected from the neighboring Concordia Parish across Black River. The darker blue clays are from the Sharkey soil series, which owe their origin to alluvial deposits of sediment laid down in quiet or stagnant waters some distance back from the swifter streams. When dry this soil is light to dull gray and contains many minute flecks of yellowish brown to red, fine-textured soil particles, observable only under close scrutiny.

The lighter-colored clays are from the Yazoo soil series, including sandy and silty clay loam. This type of soil is present characteristically along the banks of the larger streams and horseshoe or cut-off lakes and takes the form of somewhat coarser sediments than those of the Sharkey series, but fine-textured material is also present in varying proportions. The yellow or reddish tinge to this soil is considered due to better oxidation resulting from freer water drainage and air circulation through these coarser materials laid down by the swifter currents. This is the type of material sometimes applied to the surface of pottery vessels before they receive their red paint.

Another constituent of the clays was a bright blue mineral substance identified as "vivianite", a hydrous ferrous phosphate. When first discovered during the progress of excavation of the Great Mound it was found adhering to the outside of the cane layers, in places forming such a coating that it was thought it might have been used intentionally as a pigment. But subsequent digging disclosed the fact that it appeared first as a speckling of white particles in portions of the clay in which organic matter was most prevalent, in the fire level particularly. After only a few minutes' exposure to sun and air these white specks turned to

a bright blue, the color found on the cane sheets. So far as known, this occurrence cannot be considered as a reliable determinant for the age of the deposits in which it is found, nor can it be proved that the aborigines made intentional use of it as a coloring matter.

The conclusion reached by the investigators was that all of the various colored soils used in the construction of the mound probably were taken from no great distance away, so that no unusual amount of labor would have been required for their transportation. Likewise, the pottery gave evidence of having been manufactured out of local clays close at hand.

Wood, Bark, and Cane

Specimens of the cane layers, bark and slab fragments, logs, posts, and stakes were saved from the various parts of the Great Mound site where they were uncovered and were sent for identification to Mr. W. N. Watkins, assistant curator, Section of Wood Technology, United States National Museum. Mr. Watkins also called into consultation Dr. S. J. Record, professor of forest products, Yale University School of Forestry, and although the structure of the woods in most cases was found to be badly distorted due to the great weight of the damp clay which had covered it, the following woods were identified: Southern yellow pine (*Pinus* sp.), southern cypress (*Taxodium distichum*), chinquapin (*Castanea pumila*), red gum (*Liquidambar styraciflua*), black willow (*Salix nigra*), ash (*Fraxinus* sp.), black locust (*Robinia pseudoacacia*), hickory (*Hicoria* sp.), pecan (*Hicoria pecan*), and persimmon (*Diospyros virginiana*).

The palisade posts were found to consist of cypress, willow, ash, gum, and locust. In the log pile were pine, cypress, and chinquapin. Locust, pine, and chinquapin had been used for stakes, and most of the slabs and boards on the slope were of hickory, with some pecan, gum, and persimmon. The split log lying beneath the cane layers in the hollow was red gum.

An attempt was further made to determine if any of these woods presented a sufficiently well-preserved growth record in the rings to indicate at what period of time they had been cut and placed around the original Great Mound. For this purpose sections of the best specimens of the logs and posts were sent to the dendro-chronological laboratory of Dr. A. E. Douglass at the University of Arizona, Tucson, and he replied in substance that the work of studying growth changes in the trees of the lower Mississippi Valley had not yet progressed to a point where dating sequences could be made, as has been done so successfully in the Southwest, but he thought, nevertheless, that the cypress, and possibly the yellow pine and chinqua-

pin, might be useful for future determinations of this kind. He also suggested that archeologists working in the valley region should, when feasible, make sections of living trees, to compare with any woods that might be found in the mounds. The association of ancient timbers with pottery of a type generally regarded as prehistoric in age, as for example the Hopewell, might, when compared with recently cut logs of the same wood, furnish a clue to the antiquity of this culture, which was undeniably the first at the Troyville site.

The cane was all of the common swamp variety (*Arundinaria tecta*), which formerly grew abundantly all over the lowlands, but since the advent of the plantations its habitat had been more and more restricted until today it is virtually limited to the deep swamps at the lower end of Concordia and Catahoula Parishes. It was cut, trimmed, and split either into halves or quarters before being laid down in the great sheets crisscrossing each other everywhere in the bottom of the Great Mound. Yet in the section cut through by the north trench, the uppermost covering of cane stalks retained their hemispherical appearance in spite of the tremendous weight of more than 75 feet of clay which had been piled on top of them. At some points over the site there was a faint indication of withes of grass which had been used to bind the canes into bundles, but these had been pressed down and flattened so tightly against one another that it was almost impossible to detect any separation of these packets (pl. 9, *c*).

Mention of the occurrence of cane layers in one or two mounds in Alabama and Arkansas has been made by other investigators, but not enough details are given to permit any careful comparison.[36] Various theories were offered by the onlookers to account for the presence of the cane in the Great Mound, but none of them seemed to explain satisfactorily this unusual feature. The excavators themselves feel constrained to wait for further investigation of other large mounds where it may be possible to uncover similar cane layers that might exist intact, and thus to discover what the purpose of the aboriginal builders may have been in placing the cane in the mound.

CULTURAL HISTORY

Historic Tribes

The Troyville region in historic times was occupied by tribes constituting an important subdivision of the Muskhogean linguistic stock called the Natchesan group after their principal tribe, the Natchez. Westward were the Caddoans, to the north tribes of the

[36] Thomas, 1894, pp. 217, 284.

Tunican group, and south of the Red River Valley the Atakapan groups. Bordering the latter on the east were the Chitimacha, and beyond them along the Mississippi were the true Muskhogeans akin to the Choctaw, Chickasaw, and Creeks. Of the Natchesan Indians the nearest were probably the Taensa, situated in 8 or 9 villages on a horseshoe-shaped lake near the Mississippi which Swanton identifies as Lake St. Joseph in Tensas Parish. Here they were found by members of La Salle's party on descending the river in 1682 for the first time. This is the earliest written record mentioning the Taensa by name, but there is reason to believe that they inhabited the region as far back as the time of De Soto's expedition 140 years earlier, a supposition which rests mainly on the statements of Tonti and Nicholas de La Salle that they saw in the cabin of the chief an old Spanish sword, some guns, and many brass bucklers hanging on the walls.[37] This has given rise to the theory that the Taensa may possibly, in part at least, have been the people of Aminoya, the town whence the remnant of De Soto's party embarked after their futile trip out onto the plains of Texas, seeking the route to Mexico. To support this contention it is necessary to assume that Lake St. Joseph was at that time, in 1543, part of the main channel of the Mississippi and was cut off subsequently, thus forming the present oxbow lake.

In the description of the Taensa village and its temple there are several analogies to certain features found at the Troyville Mounds. Tonti says, "This temple is enclosed in a kind of redoubt, where they put upon the wall the heads of their enemies who they have killed in war." And again, "There is a temple opposite the house of the chief, and similar to it, except that three eagles are placed on this temple, who look toward the rising sun. The temple is surrounded with strong mud walls, in which are fixed spikes, on which they place the heads of their enemies whom they sacrifice to the sun."[38] Although it is nowhere stated that this temple was on a mound, we know with certainty that the temple of the Natchez, with whom the Taensa were most closely connected, was so situated.

Various other early French explorers and missionaries, including Membré, La Source, De Montigny, Iberville, Penicaut, Gravier, and Le Petit, describe the Taensa temple and give us other particulars concerning it.[39] It was said to be large, well made, in the shape of an oval over 100 feet in circumference (Membré says 30 by 12 feet) with no windows but only a low door 4 feet high and 3 feet wide. The walls were very thick, made of mud and covered with many thicknesses of cane mats, which made the edifice virtually waterproof.

[37] Swanton, 1911, pp. 258, 259.
[38] Swanton, 1911, p. 260.
[39] Swanton, 1911, pp. 260–270.

Three bird figures, said to represent eagles, painted red, yellow, and white, decorated the roof.[40] The door was also painted red and was guarded day and night by two old men, for whom a kind of shed or shelter was built which had folding doors. The skull-topped palisade formed a circle completely around the temple.

This building served not only as a place of religious ceremonies but also as a repository for the bones of the chiefs of the tribe and the servants sacrificed to accompany them. Shelves were arranged around the interior, on which were placed oval-shaped baskets made of cane containing the sacred relics. In other flat baskets, which were beautifully painted, there were human images of stone and clay, their idols. Stuffed owls, the heads and tails of serpents, and pieces of rock crystal are also mentioned as objects of veneration.

A fire was kept burning continually in the temple. Only dry hickory or oak could be burned in it, and then only the ends of the logs were lighted to prevent the fire from blazing too brightly. This eternal vigilance was not entrusted to a set of Vestal Virgins but rather to certain old men who were also the guardians of the temple. Their number and the term of their service was fixed, and each was obliged in his turn to carry a large log into the enclosure formed by the palisade, where it was turned over to the one of their number whose duty it was to feed the fire. This guardian was placed like a sentinel under the shed to watch that the fire did not burn too brightly nor go out altogether. The fire was at the foot of a kind of altar on which rested the coffins and relic baskets. Outside the door was a block of wood on which was placed a great shell wound round with the hair of their enemies in a plait about as thick as the arm and 20 fathoms long. No explanation of its purpose is given.

During a severe electrical storm on the night of March 16, 1700, a bolt of lightning struck the temple, setting it afire, and completely destroyed it, with the idols inside. The Taensa attempted to appease the wrath of the Deity whom they thought they had offended by bringing several of their infants whom they strangled and hurled into the flames. The house of the chief was next converted into a temporary temple and the sacred fire rekindled in it from the smoldering embers of the original fire.

The Natchez temple was quite similar to that of the Taensa, but according to the illustration furnished by Du Pratz it had a rectangular shape with a peaked roof.[41] (This is not regarded by Swanton as positively authentic, however.) Like the cabin of the great chief, it was placed on a low mound not over 8 or 10 feet high but at the opposite side of the village square, which was 250 by 300 paces in

[40] Cf. Bushnell, 1927, pl. I.
[41] Swanton, 1911, pl. 4 b.

size. It also had thick walls and the door faced east toward the rising sun. Penicaut gives details about the construction of the temple that are of particular interest here, if indeed they are reliable. But he differs from most of the other observers in regard to the shape of the building. He says:

> It is built of walnut (probably hickory) trees, as thick through as the thigh below, all of the same height. They are bent above in a semicircle, the ends being joined together; then they attach canes, made and shaped like our laths, from half foot to half foot from bottom to top. They wall in and fill up the empty spaces between the laths with heavy earth and cover it with straw; then they set in place still other laths which they bind together like the first at the ends above in a circle to hold in place the straw which is beneath; then they cover all with mats made of canes split into four pieces. These mats are 10 feet long and 6 broad; they are almost like the wattles with which they cover the temple; every year they renew the covering.[42]

Du Pratz states that the four corner posts were of cypress about a foot and a half in diameter. They rose to a height of 10 feet and extended for almost as great a distance into the earth. The other posts were of the same wood, a foot in diameter, and with their butts equally well buried.[43] The interior features were very similar to those of the Taensa temple, as were the three carved birds on the roof, but there was no wall of earth or palisade about the Natchez temple, and no mention is made of any exhibit of impaled skulls.

Swanton goes on to say that the temple "was a characteristic feature of lower Mississippi culture. Specific references are made to temples among the Natchez, Taensa, Quinipissa, Mugulasha, Acolapissa, Pascagoula and Biloxi, Houma, Grigra, and Tunica, but the smaller tribes had them also." The Chitimacha had sacred houses resembling temples in many ways, but only a kind of shed for conjurers is recorded among the Atakapa. Then again, quoting Du Pratz:

> Many of these nations have only very simple temples, which one would often take for private cabins. However, when one comes to know he distinguishes them by means of two wooden posts at the door made like boundary posts with human heads, which hold the swinging door with a fragment of wood at the end, so that the children may not be able to open the door and go into the temple to play. In this way the door can be raised only above these posts, which are at least 3 feet high, and it requires a strong man to lift it. . . . Besides near these little temples some distinctive marks are always to be seen, which are either small elevations of earth or some little dishes which announce that in this place there are bodies interred, or one perceives some raised tombs, if the nation has this custom.[44]

While none of these descriptions exactly fits the features discovered in the Great Mound at Jonesville, they offer as plausible an explana-

[42] Swanton, 1911, p. 159.
[43] Swanton, 1911, p. 162.
[44] Swanton, 1911, p. 167.

tion as can be given at the present time. So it is quite probable that at one or more of the early stages in the mound's construction it served as the foundation for some such temple, and the whole may have presented an appearance similar to that shown in figure 15. However, when the final summit cone was added, which gave the mound a total height from the ground of 80 feet, and this cone, according to Dunbar, was not over 8 feet in diameter at the top, it is apparent that it could no longer have served in such a capacity and therefore must have been put to another use, such as a lookout or signal tower.

The Avoyel was the other tribe most likely to have influenced in some manner the culture of the Troyville Indians. Iberville first heard the Avoyel referred to under the Mobilian name of "Tassenocogoula", which Penicaut interprets as "Nation of the Rocks."[45] But the following year, in 1700, Iberville himself recounts meeting

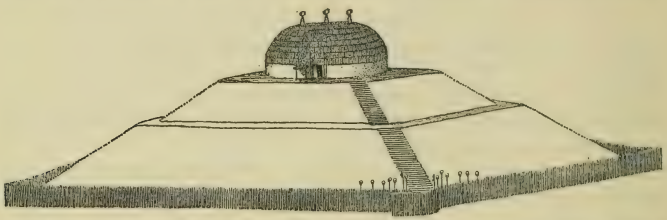


FIGURE 15.—Idealized view of the temple and temple mound of Anilco in the time of De Soto, 1542.

with a party of 40 warriors of this tribe which he calls "Little Taensa." This suggests a relationship to the latter tribe and through them to the Natchez, and Swanton considers the name "Avoyel" itself to be closely akin to certain words in the Natchez tongue, meaning rock or flint people. The Avoyel lived on the first high land south and west of the mouth of Red River in the region now known as Avoyelles Parish. The most impressive group of mounds in this district is the Marksville site, and resemblances between sherds from these mounds and those at Jonesville have already been noted. But as the Marksville sherds were not found in association with European trade articles there is no positive assurance that they were made by the Avoyel, as those Indians were undoubtedly recipients of European goods in return for the stolen Spanish horses which they purveyed to the French. After 1714 they were found occupying a small village at the rapids on Red River (i. e., near the site of Alexandria) and by 1805 they had become virtually extinct.

[45] Swanton, 1911, p. 272. The actual meaning is "Flint people", derived from two Choctaw words, Tasąnnuk, flint; okla, people. Cf. Byington, 1915.

Not the slightest indication of Caddoan influence is present, although the Ouachita, a member of the Caddo confederacy, lived only a short distance above the Troyville Mounds on the Ouachita River. Neither are there any traces of Tunican contacts other than those already mentioned under the section on pottery.

Protohistoric Period

There is good reason for believing that the Troyville site was visited as early as 1542 by the Spanish explorer, Hernando de Soto, on his search for the gold and silver which he hoped was to be found in the newly discovered province of Florida. Two of the most eminent students of De Soto's route west of the Mississippi, Dr. John R. Swanton, and Col. John R. Fordyce. of Hot Springs, Ark., have provisionally identified the great Indian mound city of Anilco with the mounds at Jonesville.[46] Fordyce has arrived at his conclusion mainly from a consideration of the topography of the region through which the Spaniards marched, while Swanton has relied more on the ethnographical data presented in the narratives of the expedition, but he reaches about the same conclusion. It was the writer's hope that archeology would be able to furnish additional proof or disproof of this theory by excavation of the site itself. But as far as producing any objects that could be attributed to any such early contacts with the white man the results were negative, therefore the evidence must rest on the interpretation of the narratives themselves.

There were only two gentlemen of De Soto's company, so far as known, who kept complete journals of the trip and have left us written records of it. The first account to appear in print was that of the Fidalgo of Elvas, whose True Relation was published at Evora, Portugal, in 1557. It was actually preceded by the official report of the King's Factor, Hernandez de Biedma, written in 1544, but this does not seem to have appeared in print before 1841. This report is written in a rapid, brief style which, although it does not go so deeply into detail, nevertheless corroborates the Elvas account in many places. A third account still more recently discovered is that written by Rodrigo Ranjel, De Soto's private secretary, hence it is generally regarded as the most authoritative of all, but unfortunately the portion dealing with the route subsequent to November 2, 1541, has been lost, so that it does not deal with the region under discussion. The fourth narrative was not written by a participant in the expedition but by a contemporary historian, Garcilaso de la Vega, whose part Spanish, part Inca ancestry furnished him with the sobriquet, "Garcilaso the Inca." That he obtained much of his material for his History of the Conquest of Florida from tales told

[46] Fordyce, 1929, p. 67.

by the survivors of De Soto's ill-fated explorations is undeniable, but it is also true, unfortunately, that his romantic origin led him to color his historical writings with vivid flights of his imagination. This charge against Garcilaso has been pressed so strongly that he has been in danger of becoming discredited altogether as a chronicler of the expedition of 1539, yet Swanton in a recent article [47] has come forward in his defense, by showing that there is a considerable amount of valuable information for the archeologist and ethnologist, as well as the historian, in this narrative. These four narratives, then, constitute the only primary sources known at present from which the actual route of "the first explorer of the South" may be traced.

The expedition, after reaching the vicinity of Hot Springs in south central Arkansas, turned southeastward and began to follow a river which they termed the River of Anilco, named for a province through which it flowed farther downstream. This is not the Arkansas River, as has been assumed by earlier writers, but the Ouachita, according to Fordyce and Swanton. After spending a hard winter at a town believed to be near the present city of Camden, Ark., the Spaniards resumed their march downstream until they came to the province of Nilco, or Anilco.[48] The first town in this region was named Tianto, and while De Soto and the main body rested here a detachment was sent on to the capital city only a few leagues away. En route the advance party passed through several other good-sized towns. The following description is taken from Elvas:

> The following day, Wednesday, the twenty-ninth of March (1542), the Governor arrived at Nilco, making his quarters and those of his people in the town of the Cacique, which was in an open field, that for a quarter of a league over was all inhabited; and at the distance of from half a league to a league off were many other large towns, in which was a good quantity of maize, beans, walnuts, and dried ameixas (persimmons). This was the most populous of any country that was seen in Florida, and the most abundant in maize, excepting Coça and Apalache. An Indian attended by a party arrived at the camp and, presenting the Governor with a cloak of martin skins and a string of pearls, he received some *margaridetas* (a kind of bead much esteemed in Peru), and other trinkets, with which he was well pleased. At leaving, he promised to be back in two days, but did not return. In the night-time, however, the Indians came in canoes, and carrying away all the maize they could take, set up their huts on the other side of the river, among the thickest bushes. The Governor, finding that the Indians did not arrive within the time promised, ordered an ambuscade to be placed at some cribs, near the lake, to which the Indians came for maize. Two of them were taken, who told him that the person who had come to visit him was not the Cacique, but one sent by him, pretending to be he, in order to observe what might be the vigilance of the Christians, and whether it was their purpose to remain in that country, or to go farther. Directly a captain, with men on horseback and foot, were sent over to the other

[47] Swanton, 1932, p. 570.

[48] Spelled Anicoyanque, according to the Biedma narrative.

shore; but, as their crossing was observed, only ten or a dozen Indians, of both sexes, could be taken; and with these the Christians returned to camp.[49]

According to Garcilaso:

It (Anilco) is upon the banks of a river wider than the Guadalquivir, and has about four hundred good houses, with a beautiful square in the middle. The dwelling of the cacique is upon an eminence which commands the town. This lord was, at the arrival of the troops, in front of this place at the head of a battalion of fifteen hundred men, the *élite* of his subjects. The Spaniards, who observed the deportment of the Indians, made a halt to await the soldiers, who followed in the rear, and promptly arranged themselves in order of battle. In the meanwhile, Anilco ordered that the women should retire, and that each one should save the most valuable things he had, and at the same time our army advanced to attack, but the barbarians fled without shooting an arrow. Some entered the town, and the greater part crossed the river in little boats and upon rafts, and a few by swimming, for they had no intention to fight, but only to arrest the enemy, to favor those who carried off their goods. Our men, when they saw that the Indians fled, charged upon them and captured a few upon the banks of the river, and took in the town many women and children who had not been able to escape. The general afterwards sent to offer peace and his friendship to Anilco, and to request of him his good offices. But he would not reply, and only made with his hand a sign to the envoy that he might retire.[50]

Biedma passes over this region of Anicoyanque with the single statement that it "appeared to us to be one of the best we had found in all the country."[51]

De Soto remained 4 days at Anilco building boats and rafts with which to cross the river, and while there he was visited by a chief from the neighboring town of Guachoya, capital of a province of the same name bordering the Chucagua or Rio Grande (Mississippi). Elvas says of the river of Anilco, "This river, passing by Anilco, is the same that flows by Cayas and Autiamque, and falls into the river Grande, which flows by Pacaha and Aquixo, near the province of Guachoya, the lord of which ascended in canoes to carry war upon him of Nilco."[52] This statement taken as it stands is somewhat confusing, and may best be interpreted to mean that the river of Anilco (the Ouachita) flowing by Cayas and Autiamque (towns in southern Arkansas) empties into the Rio Grande (Mississippi) near the province of Guachoya (Concordia Parish), and this latter river is the same as that which flows by Pacaha and Aquixo (towns on the Mississippi in the vicinity where De Soto first crossed it near Helena, Ark.).

Guachoya was reached after marching 4 days overland through unpeopled lands, according to Garcilaso. Elvas does not state the time consumed on the march but gives the date of their arrival as the 17th of April. Thus there is some discrepancy in the chronology

[49] Bourne, 1904, vol. I, p. 149.
[50] Garcilaso, 1881, p. 432.
[51] Bourne, 1904, vol. II, p. 34.
[52] Bourne, 1904, I, p. 150.

of the two accounts. But while part of the army with the governor marched overland, a captain with 50 men in 6 canoes was sent down the river to meet at the same place. The town of Guachoya was palisaded, distant only a crossbow shot from the Chucagua River, and situated, according to Garcilaso, "upon two eminences separated by only a level platform, which serves for the public square of the town, consisting of three hundred houses, half upon one of these hills and half upon the other. The house of the cacique is upon the highest of these two eminences." [53] The Spaniards took the inhabitants by surprise as their enemies, the Anilco Indians, did not warn them of the coming of the invaders, hence when they saw the Spanish troops they fled hastily across the great river, taking with them as many of their belongings as they could carry. De Soto and his men were content to remain in Guachoya, as they found there a good store of fruit and corn.

A few days later, however, the chief of Guachoya returned, bringing presents with him to court favor with De Soto and to attempt to induce him to aid in a proposed attack on Anilco. The chief explained how it was possible to go in canoes 7 leagues down the Chucagua to the mouth of the Anilco, then about 13 leagues up that stream to the town of Anilco, a total journey of not over 20 leagues. De Soto readily fell in with this plan, as he thought it would increase his prestige among the Indians, and again Garcilaso supplies a vivid account of the raid:

> Then Soto ordered Gusman and his company to embark with four thousand Indians and many rowers armed with bows and arrows. This captain therefore entered into these boats with all these troops, and descended the river. Immediately the general, with all the other Spaniards, and Guachoia, with two thousand of his subjects, marched by land accompanied by a great number of Indian porters, and all arrived at the same time, in view of the town of Anilco where the cacique was not at that time. Nevertheless, the inhabitants bravely disputed the passage of the river, but when they saw that it was impossible for them to resist longer, they took to flight and abandoned the place. The subjects of Guachoia entered with fury, pillaged and ransacked the temple where was the sepulchre of the lords of the province, with the wealth of Anilco. In this temple were the arms and ensigns which the subjects of Anilco had won from their neighbors; and at the doors were seen upon lances, the heads of the most important vassals of Guachoia. But the people of this cacique took off these heads and quickly put in their places those of some of the subjects of Anilco. They recovered the ensigns, overturned the coffins,[54] trod upon the dead in revenge of the outrages which they had formerly received from them, and slew all without sparing age or sex.[55]

Garcilaso ascribes the most horrible cruelties to the Indians, but Elvas indicts the Spaniards just as severely, saying that about 100

[53] Garcilaso, 1881, p. 433.

[54] These coffins were presumably cane baskets such as those in use by many of the Louisiana Indians, according to Du Pratz. Vide Swanton, 1932.

[55] Garcilaso, 1881, p. 435.

Indians were slain and many more allowed to get away badly wounded, and 80 women and children captured. Much booty, especially in the form of clothing, was taken, and the town with its houses of straw sheltering a population of five or six thousand was set afire by the hostile warriors before they rejoined the Spaniards already en route for Guachoya.

Another party under Juan de Añasco was sent out from this town to explore southward along the great river to learn what the country was like and how far it was to the sea. But they returned after 8 days without accomplishing their object with the report, "that in all that time he could not travel more than 14 or 15 leagues, on account of the great bogs that came out of the river, the canebrakes and thick scrubs there were along the margin, and that he had found no inhabited spot." [56] This description fits admirably the swampy lowlands in the Red River delta at the lower end of Concordia Parish, and so far as known there are no groups of mounds on the west side of the Mississippi below Vidalia, but there is a group on the outskirts of Ferriday, which might correspond to the site of Guachoya. The difficulty is, primarily, to determine the exact course of the river at that time, as its recorded changes in the last 150 years suggest the possibility that it may at one time have run much farther west, nearer some of the numerous mound groups along the present Tensas River.

Downstream 3 leagues from Guachoya on the opposite shore lived a powerful chief of a province called "Quigaltam", and De Soto, thinking to subjugate him as easily as he had the chiefs of Anilco and Guachoya, sent a message demanding that he come before him. But the answer he received has become a classic for its tone of proud and haughty independence:

> As to what you say of your being the son of the Sun, if you will cause him to dry up the great river, I will believe you; as to the rest, it is not my custom to visit any one, but rather all, of whom I have ever heard, have come to visit me, to serve and obey me, and pay me tribute, either voluntarily or by force; if you desire to see me, come where I am; if for peace, I will receive you with special goodwill; if for war, I will await you in my town; but neither for you, nor for any man, will I set back one foot.[57]

The spirited reply of this chief, together with the other bits of ethnographical description of the customs of his people, strongly suggests the Natchez Indians encountered by the French 140 years later in about the same locality. This helps to place the site of Guachoya and indirectly that of Anilco, the former being slightly upstream from the Natchez bluffs and the latter inland on a tributary stream.

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[56] Elvas in Bourne, 1904, p. 153.
[57] Elvas in Bourne, 1904, p. 154.

De Soto fully intended to chastise this insolent savage, but before he could carry out his design he fell sick of a swamp fever, which may have been malaria, and died on May 21, 1542.[58] He was first buried either in a trench just outside the town or inside one of the gates. The accounts disagree on this point, but they unite in declaring that the body was later exhumed for fear of discovery by the natives, who had already noticed his absence, and it was then committed to the river either in a hollowed-out oaken log or else in a shawl loaded with sand, at a spot ascertained to be 9 fathoms in depth.

Following the death of De Soto, Luys de Moscoso became leader of the expedition with the title of governor, but he was easily persuaded by the other captains to abandon the enterprise, and to attempt instead to reach Mexico overland. Accordingly, on the 5th of the following month (June or July) they left Guachoya and started west. But Anilco apparently was not visited on this march, as mention is made of a province of a different name, Catalte, through which they traveled. The route of the Spaniards took them out into Texas to a river which they called "Daycao", probably the Trinity. When they saw that they were not likely to reach Mexico that way they decided to return to the Chucagua River and attempt the trip by water. They came again to Nilco, but found little maize there this time, as the Indians had not dared to plant their fields as long as the Spaniards were thought to be in the land. This disturbed Moscoso and his men a good deal, as they were themselves beginning to suffer from lack of provisions and winter was coming on fast.

It was decided to push on to another town, of which they heard, distant 2 days march, and located like Guachoya on the Chucagua. This town was called Aminoya, and the cacique of Anilco offered gladly to lead the Spaniards thither and aid in its capture. Garcilaso says it was within 16 leagues of Guachoya and that there were two towns in a level open field, half a league apart, in sight of one another. "These villages consisted of two hundred houses, and were each surrounded with a ditch, the water of which came from the Chucagua, which made an island of each."[59] They chose for their quarters the best town, which was stockaded and set back a quarter of a league from the Chucagua. The other they destroyed, after first removing all of its stores of maize and other foodstuffs. They spent the winter and following spring at Aminoya building the boats which were to carry them down the river to the sea and on to Mexico. Fordyce believes the site of this town was somewhere near Lake St. Joseph in Tensas Parish, because in the cabin of the Taensa

[58] June 21, according to Garcilaso.
[59] Garcilaso, 1881, p. 449.

chief visited by La Salle's party in 1682 some metal weapons and shields were seen which were thought to have belonged to the Spaniards.[60]

In the spring they were further delayed by heavy floods, which they were assured by an old native woman came regularly about every 14 years. Elvas says:

> In March, more than a month having passed since rain fell, the river became so enlarged that it reached Nilco, nine leagues off; and the Indians said, that on the opposite side it also extended an equal distance over the country.[61]

Garcilaso states that "the waters entered violently through the gates of Aminoia, so that, two days after that, they could not go through the streets except in boats." This might indicate that the town was protected by an embankment of earth as well as a palisade. He continues:

> Because of the inundations of the Chucagua, the Indians who inhabit both sides of the river, place themselves, as much as possible, upon eminences, and build their houses in this manner. They erect, in the form of a square, enough large posts in the shape of pillars, upon which they place many beams which take the place of floors. Then they make the house which they surround with galleries, where they lay up their provisions and furniture. Thus they protect themselves from the inundations, which probably occur on account of the rains and snows of the preceding year.[62]

Once more the Spaniards visited Anilco, 20 leagues from Aminoya, this time going in boats over the deeply flooded land. At Anilco they found that the Chucagua had overflowed much farther, inundating on that side more than 25 leagues of land. The Spaniards restored to the cacique his son, whom they had carried with them on their trip into Texas, and the chief, overjoyed, hastened to supply them with the materials which they needed, and sent them back with several men of his own to Aminoya.

Only the coming of the flood prevented a general uprising among all the neighboring tribes, who were determined to exterminate the small band of Spaniards which had been spared by warfare, disease, and hardships. Moscoso, learning of this conspiracy, succeeded by harsh measures in breaking it up for the time, but under the leadership of the cacique of Quigaltam they continued to harass the Spaniards when they were finally ready to leave the country. It was on July 2, 1543, according to Elvas,[63] that they at last set sail, passing by Guachoya the same day, successfully eluding what they feared was a trap to lure them on shore. But they did not fare so well passing by the territory of Quigaltam, and had to fight their way a good part of 17 days before at last reaching the sea.

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[60] Cf. p. 51.
[61] Bourne, 1904, p. 189.
[62] Garcilaso, 1881, p. 458.
[63] Bourne, 1904, p. 193.

The chief interest for the archeologist in the foregoing accounts is the description of the 3 important towns of Anilco, Guachoya, and Aminoya. All of them are mentioned as having the houses of the chief and the other prominent men on high mounds, and in all probability the temple was similarly situated. Apparently, also, a palisaded embankment protected each town. Of the three, Anilco should be the easiest site to locate, because the other two were close to the ever-shifting course of the Mississippi, while the former was on a tributary stream whose channel might be expected to remain relatively more stable. The principal difficulty involved in recognizing the Troyville mounds as the site of this ancient capital lies in the statement that the River Anilco emptied into the Chucagua about 13 leagues (approximately 35 miles) below Anilco and 7 leagues (19 miles) below Guachoya, which was on the great river. Black River passing by Jonesville does not now empty directly into the Mississippi but into Red River about 60 miles from its mouth, yet it is interesting to note on the topographic map of this region the maze of sloughs and bayous, almost any one of which would provide navigable connections between the Mississippi and the Black during periods of overflow. If, in addition, the two large lakes south of Jonesville known as Cocodrie Lake and Larto Lake are assumed to be ancient cut-offs from the Mississippi itself, as it is quite possible that they were, Black River would then have emptied directly into the great river, and this objection would be invalidated. The Troyville group in almost all the other particulars answers well the description of Anilco, and there is also another group of mounds a few miles farther upstream near Harrisonburg that might readily correspond to Tianto, the frontier town of the Province of Anilco.

Prehistoric Occupants

The earliest occupants of the Troyville site were evidently the people who left the Hopewell type of pottery in the fire level at the bottom of the Great Mound. Hence, it follows that they were also probably the builders of the original mound which formed the nucleus of the later Great Mound. Whether they were likewise responsible for the palisade and stepped approach is not so easy to determine, as these features were intruded through the fire level. Because of the resemblance between the earthworks at the Troyville and Marksville sites and the further similarity of their pottery types it is quite possible that one is an offshoot or colony of the other, but which is the mother settlement it is not yet possible to state.

F. M. Setzler in a recent paper [64] has pointed out the existence of what may be called a southern aspect of the Hopewell culture, not only at Marksville but also at other sites from the Louisiana

[64] Setzler, 1933.

Gulf coast up the valley of Red River into southwestern Arkansas, and up the Mississippi Valley and Sunflower River into western Mississippi. It now appears that the Black River region in Louisiana must also be included in this distribution.

Regarding the direction of migration or spread of these people, the writer inclines to the theory that the Hopewellians were originally a southern tribe, or perhaps stock, who spread up the valley of the Mississippi and some of its tributaries, eventually reaching the Scioto Valley in Ohio, where they settled down and developed their distinctive culture to its highest degree. They may perhaps have established side colonies at various points along their route, or these may have resulted from expeditions sent out from the secondary point of dispersal in Ohio. It is fully admitted that there has not yet come to light any positive proof for the contention of a southern origin for the Hopewell people, but at least there are indications that the resemblance between the northern and southern sites was due to something stronger than mere trade contacts. Both at the Troyville and Marksville sites the ware was found to be manufactured of local clays in which the tempering was of hard particles of unpulverized clay rather than the grit characteristic of the northern pottery. This rules out of consideration the possibility that the finished vessels served as trade articles between the two areas.

But while in both sections this pottery type is invariably associated with an unmistakable prehistoric period of occupation, the exact interrelation of the two aspects of Hopewell culture must await more detailed investigation of the intervening portion of the Mississippi Valley.

That there were also other prehistoric occupations of the Troyville site is suggested by the finding of pottery similar to that from other known prehistoric sites in the Mississippi Valley and Gulf coast, as has been noted above in the discussion of pottery. How far back in the past this site was first inhabited it is impossible to say, but it was certainly at some time prior to 400 years ago.

CONCLUSIONS

On the basis of the archeological, ethnological, and historical data here presented it may be of interest to set down what the excavators conceive to have been the history of the Troyville mounds. At some unknown period previous to 400 years ago, a people whose culture resembled that of the Hopewell mound builders of Ohio came up the valley of the Mississippi from the Gulf coast and settled first at Marksville on the bluff overlooking the ancient course of Red River. A side expedition was sent out from here which entered

Black River and stopped for a time in the vicinity of Larto Lake, then proceeded to the junction of the three rivers, Ouachita, Tensas, and Catahoula, which together form the Black. A spot of land on the west bank was selected and the growth of canes, grass, and brush was burned off over a considerable area. Here the building of a large mound was begun by carrying masses of clay from the nearby lowlands in sacks made of skins and packing down hard each load as it was dumped into place. After a platform only a few feet high had been built in this manner, work was stopped for a time and the surface became littered with camp-site refuse—ashes, charcoal, burned and broken animal bones, potsherds, seeds, etc. This resting period lasted sufficiently long for two small pecan trees to take root and grow on the slope. At times the work on the mound was interrupted by overflows from the river which left thin strata of sediment in certain places. The trash and weeds were again burned off until only the stumps of the twin pecan trees were left and these were soon covered by the accumulating pile of earth.

Whether the same people who built the original mound were also responsible for this second stage of construction is not certain, but in any event they inaugurated important changes. A portion of the fire-littered slope below the two pecan stumps was dug through and a line of stout posts was set up, the butt of each extending down several feet into undisturbed soil and tamped about with a mottled clay. Instead of restoring that part of the slope inside of the palisade, a level platform several feet wide was built, and over it was carefully spread a layer of reddish-yellow sand.

Two logs, one on top of the other, were placed outside of the posts on the downslope, which was left with a smooth, slippery surface almost as though it had been oiled. A little farther along at the base of the slope nine logs were laid in a pile, each carefully cut and trimmed at both ends. A series of long slabs, mostly of hickory, were laid on the slope side by side, evidently while the embers beneath were still smoldering, as some of these boards were charred on the under surface. A little above them a gully or hollow on the slope had been filled by placing in it two logs, one of which had been split and hewn and slightly hollowed out. These were likewise charred on the under side. Over the top of the logs was placed a covering of cane layers many inches thick which were constructed in the form of great sheets made of split cane stalks, each thickness crisscrossing the one beneath it.

At the western side of the slope a stepped approach was constructed up a gentle incline. It was made by placing four logs to serve as risers with palmetto fronds and grasses covering the otherwise slippery treads. A human head without the jaw was first deposited below the log at the bottom of the stairway. This

may have been a symbolic cornerstone for the temple or ceremonial structure which was undoubtedly erected on the mound. The head may have come either from a captive of war or a common slave, or it may have been one of a number formerly decorating the tops of the enclosing wall of posts.

Other smaller mounds were probably built in the same way, making use of layers of clay, cane sheets, and even sand in their construction. These were all dome-shaped, and as building progressed they were finally incorporated into one great mound, which assumed the form of a terraced platform. It had ramps at each of the four corners, at least leading to the first terrace.

The Great Mound may have reached a height of as much as 45 feet at the time when De Soto and his Spaniards discovered the large capital city of the populous Province of Anilco. They record the fact that the chief's house was situated on a high eminence commanding the town, but it evidently did not differ greatly from the dwelling sites of other chiefs whose towns they had visited elsewhere in Florida, as no further mention is made of it. A temple is also described, in which were deposited in coffin baskets the bones of the chiefs of Anilco and other sacred relics, and this building was enclosed by a series of pikes on which were impaled the heads of captured enemies. Whether or not this building was also on a mound is not entirely clear, but there were undoubtedly other mounds for the dwellings of the principal men, and it is likewise probable that there was a wall or palisade around the entire town, as was true in the case of the neighboring towns of Guachoya and Aminoya. Who these Indians of Anilco were we do not know for certain, but from the bits of ethnographical description of their life and customs they show a marked resemblance to the Natchesan-speaking tribes found occupying the region 140 years later.

After the final departure of the Spaniards, possibly to serve as a watchtower to warn of the approach of other invaders, the great truncated cone may have been added to the double-terraced base already built. The summit was probably reached by a spiral path which came out onto a tiny platform just large enough to permit a fire to be kindled on its surface. If this summit platform was only 8 feet in diameter or less, as Dunbar believed it was originally, it would hardly have provided room for any kind of a structure in addition to the fire. This Great Mound, now rising 80 feet or more above the surrounding landscape, was one of a series of high mounds which have been discovered extending almost due west from the bluffs at Natchez to the head of Catahoula Lake, and it is not inconceivable that they may have served as signal stations to flash rapid smoke signals to outlying mound villages all over the Black River region, even as far south as Larto Lake.

The Taensa, or possibly the Avoyel, may have been the last historic Indians to occupy the site. Since they were both closely related to the Natchez, it is not surprising that after the destruction of their Grand Village by the French in 1730 the Natchez should have fled to their kindred in the Louisiana lowlands for asylum. They perhaps camped temporarily at the Troyville site, but on the advance of the French withdrew farther up the Tensas River to a region of higher ground known today as Sicily Island. Here they built a fort and are believed to have made their famous last stand against the superior military force under Perrier. But by a somewhat questionable stratagem the French succeeded in obtaining possession of their Great Sun and some of his leading men and so forced the surrender of the fort. The Indians, although not completely annihilated in this fight, were nevertheless dispersed into small bands, and the power of the Natchez as a nation was broken forever.

It is unlikely that the Troyville Mounds were occupied after this time by the aborigines, and the site may in fact have been abandoned a good while earlier as the result of sudden plague, pestilence, or other disease that quickly decimated the population. The fragile buildings of poles and canes, perhaps thatched with palmetto, must soon have fallen into decay, and once more the thick canebrake covered the site, even climbing to the top of the high tower of earth. So that when the first American explorers, Dunbar and Hunter, came on the scene nearly a hundred years later they had to fight their way through the dense cane thicket to gain the summit of the steep cone. Only five other large mounds were visible at this time and surrounding the whole group was the low earthen wall or embankment.

From this time on the rise of modern settlements spelled doom to the remaining traces of the old, the canebrake was again cleared, the smaller mounds leveled and plowed under, and the larger ones graded down to serve as house foundations, as what had begun first as a Spanish land grant, the Troy Plantation, grew into the town of Troyville. Naturally the Great Mound suffered the most in this process of destruction. The summit cone was cut down during the Civil War period to provide space for a large rifle pit, and the displaced earth was spread down the slope, chiefly on the north and south sides, resulting in the formation of a large, irregular, oblong mound out of what had formerly been a carefully constructed terraced pyramid-like earthen tower. Erosion gullies and dynamite hastened the process of dissolution, until the last visible remnant of the mound which was once perhaps the highest in the South and second in height only to the great Cahokia Mound in Illinois disappeared in 1931, under the relentless activity of steam shovels, scrapers, and gangs of pick-and-shovel laborers.

REFERENCES CITED

BARRETT, S. A.

1933. Ancient Aztalan. Bull. Pub. Mus. Mil., vol. XIII, Apr. 24, 1933.

BEYER, G. E.

1896. The mounds of Louisiana. La. Hist. Soc. Publs., vol. I, pt. IV, pp. 12–32, 1896.

BOURNE, E. G.

1904. Narratives of the career of Hernando de Soto, 1539–42, according to Elvas, Biedma, and Rangel. Vols. I–II. New York, 1904.

BRACKENRIDGE, H. M.

1817. Views of Louisiana. Baltimore, 1817.

BUSHNELL, D. I., Jr.

1927. Drawings by De Batz in Louisiana, 1732–35. Smithson. Misc. Colls., vol. 80, no. 5, 1927.

BYINGTON, CYRUS.

1915. A dictionary of the Choctaw language. Bull. 46, Bur. Amer. Ethnol., 1915.

COLLINS, H. B., Jr.

1927. Potsherds from Choctaw village sites in Mississippi. Journ. Wash. Acad. Sci., vol. 17, no. 10, pp. 259–263, 1927.

1932. Excavations at a prehistoric Indian village site in Mississippi. Proc. U. S. Nat. Mus., vol. 79, art. 32, 1932.

FORDYCE, J. R.

1929. Trailing De Soto. Abstract from paper presented at conference on midwestern archeology held in St. Louis, May 18, 1929. Bull. Nat. Research Council, no. 74, pp. 67–72, Washington, 1929.

FOWKE, GERARD.

1928. Archeological investigations—II. Forty-fourth Ann. Rept. Bur. Amer. Ethnol., pp. 399–434, 1928.

GARCILASO DE LA VEGA.

1881. History of the conquest of Florida. *In* Shipp, Barnard, History of Hernando de Soto and Florida, vol. II, pp. 229–487, Phila., 1881.

GUTHE, C. E.

1927. A method of ceramic description. Papers Mich. Acad. Sci., Arts, and Letters, vol. VIII, 1927.

KILPATRICK, A. R.

1852. Historical and statistical collections of Louisiana. De Bow's Review, vol. XII, pp. 256–275, New Orleans, March 1852.

MCKERN, W. C.

1931. A Wisconsin variant of the Hopewell culture. Bull. Pub. Mus. Mil., vol. 10, no. 2, pp. 185–328, 1931.

MESSAGE FROM THE PRESIDENT OF THE UNITED STATES TO CONGRESS IN FEBRUARY 1806.

1806. Communicating discoveries made in exploring the Missouri, Red and Washita Rivers, by Capts. Lewis and Clark, Dr. Sibley, and Wm. Dunbar. Observation from Journal of Wm. Dunbar and Dr. Hunter, 1804.

MONETTE, J. W.
1846. History of the discovery and settlement of the valley of the Mississippi. Vol. I, New York, 1846.

MOORE, CLARENCE B.
1909. Antiquities of the Ouachita Valley. Journ. Acad. Nat. Sci. Phila., 2d ser., vol. XIV, pt. 1, 1909.
1912. Some aboriginal sites on Red River. Journ. Acad. Nat. Sci. Phila., 2d ser., vol. XIV, pt. 4, 1912.
1913. Some aboriginal sites in Louisiana and Arkansas. Journ. Acad. Nat. Sci. Phila., 2d ser., vol. XVI, pt. 1, 1913.

RAFINESQUE, C. S.
1824. Ancient history, or Annals of Kentucky. Frankfort, 1824.

ROWLAND, MRS. DUNBAR.
1930. Life, letters, and papers of William Dunbar, 1749–1810. Miss. Hist. Soc. Press, Jackson, 1930.

SETZLER, F. M.
1933. Pottery of the Hopewell type from Louisiana. Proc. U. S. Nat. Mus., vol. 82, art. 22, 1933.

SQUIER, E. G., and DAVIS, E. H.
1848. Ancient monuments of the Mississippi Valley. Smithson. Cont. to Knowl., vol. I, New York, 1848.

STODDARD, AMOS.
1812. Sketches, historical and descriptive, of Louisiana. Phila., 1812.

SWANTON, J. R.
1911. Indian tribes of the lower Mississippi Valley and adjacent coast of the Gulf of Mexico. Bull. 43, Bur. Amer. Ethnol., 1911.
1922. Early history of the Creek Indians and their neighbors. Bull. 73, Bur. Amer. Ethnol., 1922.
1928. Social organization and social usages of the Indians of the Creek Confederacy. Forty-second Ann. Rept. Bur. Amer. Ethnol., pp. 23–472, 1928.
1932. Ethnological value of the De Soto narratives. Amer. Anthrop., vol. 34, no. 4, pp. 570–590, 1932.

THOMAS, CYRUS.
1894. Report of the mound explorations of the Bureau of American Ethnology. Twelfth Ann. Rept. Bur. Ethnol., 1894.

WALKER, W. M.
1932. A reconnaissance of northern Louisiana mounds. *In* Explor. and Field Work of Smithson. Inst. in 1931, pp. 169–174, 1932.
1933. Trailing the Mound Builders of the Mississippi Valley. *In* Explor. and Field Werk of the Smithson. Inst. in 1932, pp. 77–80, 1933.

WEBB, W. S., and FUNKHOUSER, W. D.
1931. The Tolu site in Crittenden County, Ky. Repts. in Archeol. and Anthrop., vol. I, no. 5, Univ. of Kentucky, Lexington, 1931.

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RECONSTRUCTION SKETCH OF TROYVILLE MOUND GROUP.

Based on perspective view from head of Black River in 1804.

a. West side of Great Mound, winter, 1922.

b. Multiple burial on bluff.

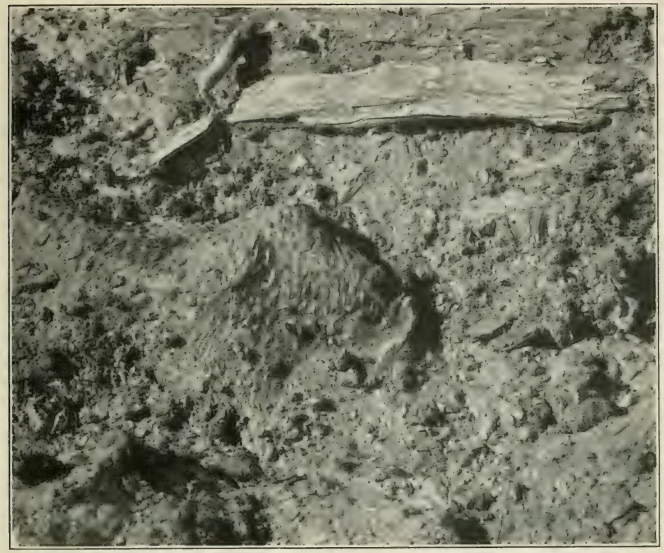
a. View of slabs on slope; tip of post in foreground.

b. Close-up of slabs in place.

SLOPE OF ORIGINAL MOUND.

a. Deposit of nine logs in place.

b. Line of post molds



a. Humped-over clay at eastern end of slope.

b. In place on western part of slope.

FRAGMENTS OF MATTING.

a. Before trenching.

b. Trenched to show structure.

SOUTH DOME.

a. Cane over North Dome.

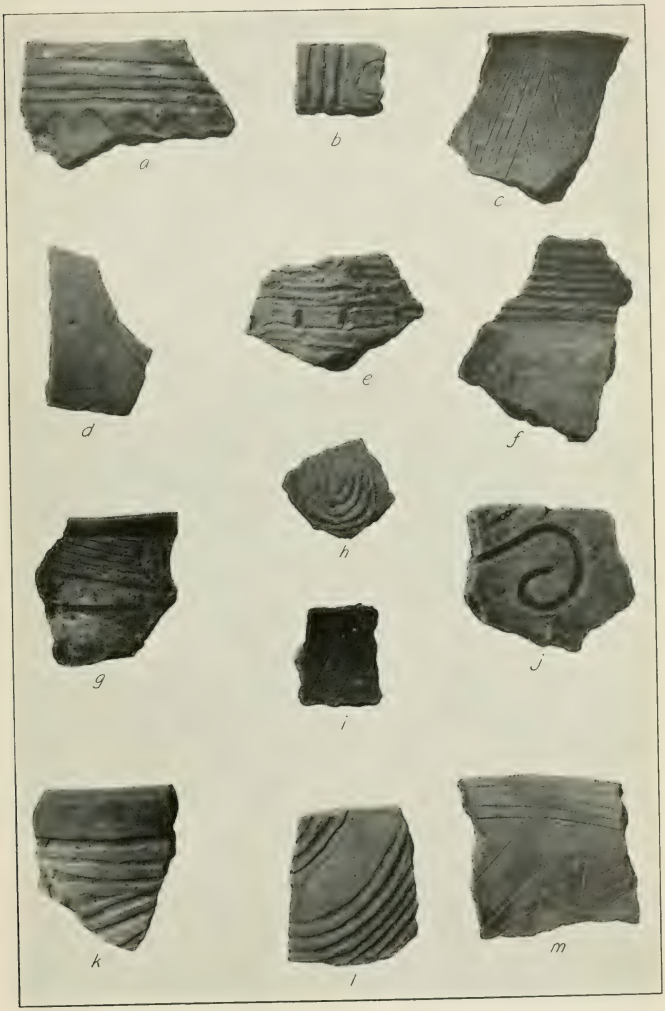
b. Stakes through cane layers.

a. General view of Bluff Mound.

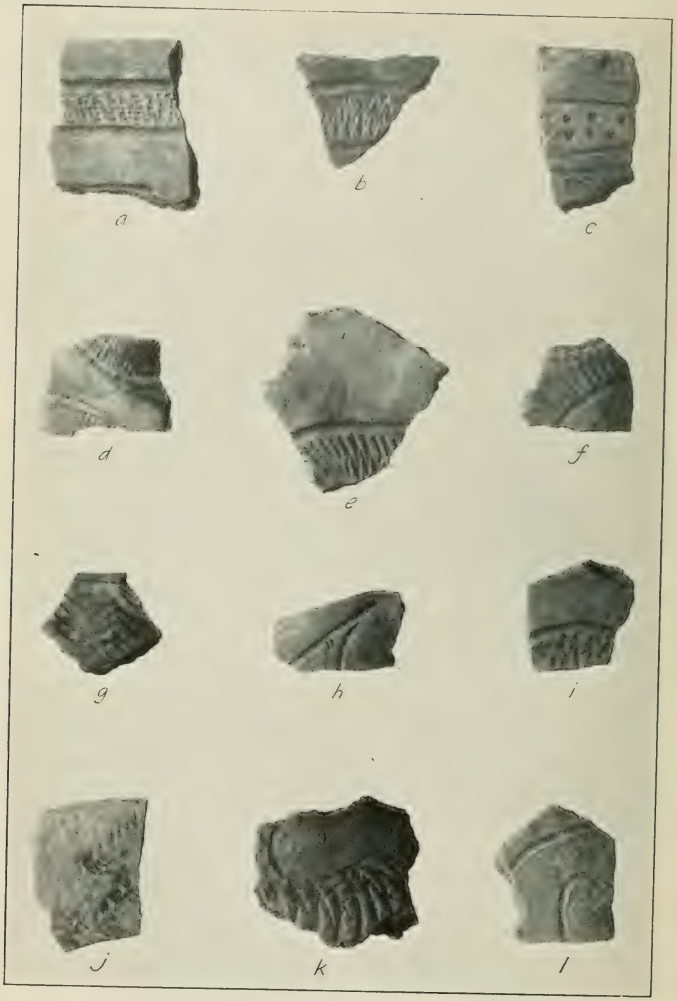
b. Excavations in North Dome.

a, b. Vessel fragments from Great Mound. *c.* Thick section of cane sheets from South Mound.

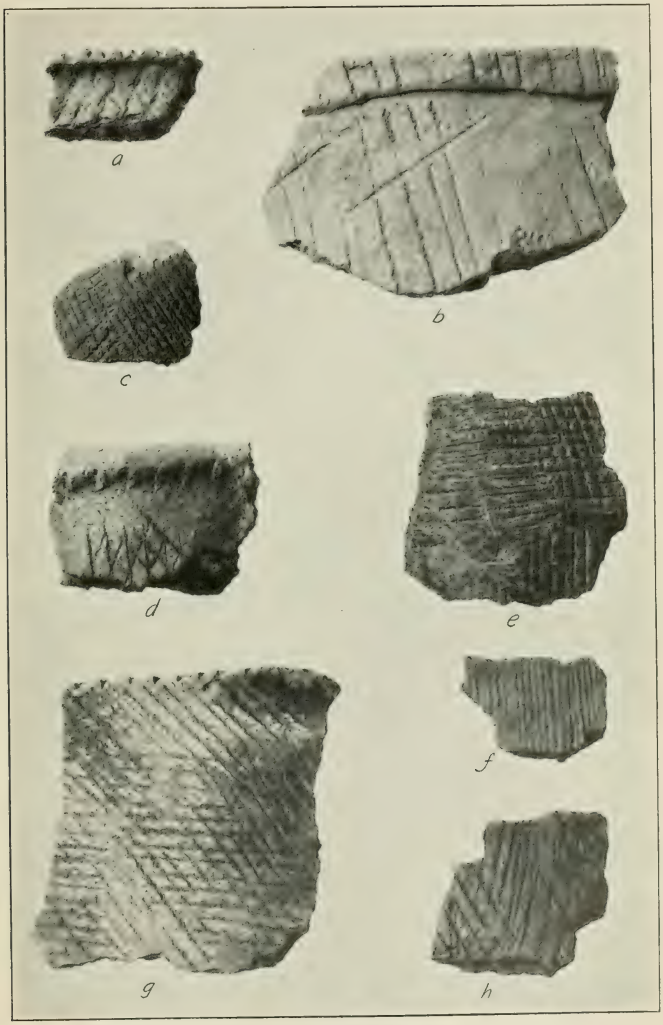
POTSHERDS FROM GREAT MOUND FIRE LEVEL.



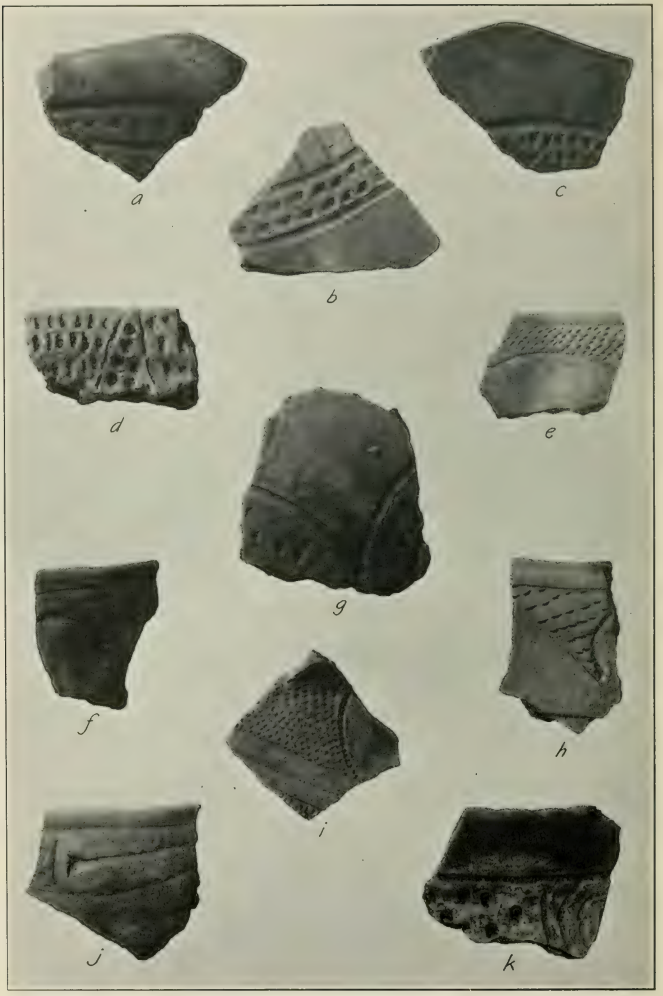
GROOVED AND INCISED WARE.



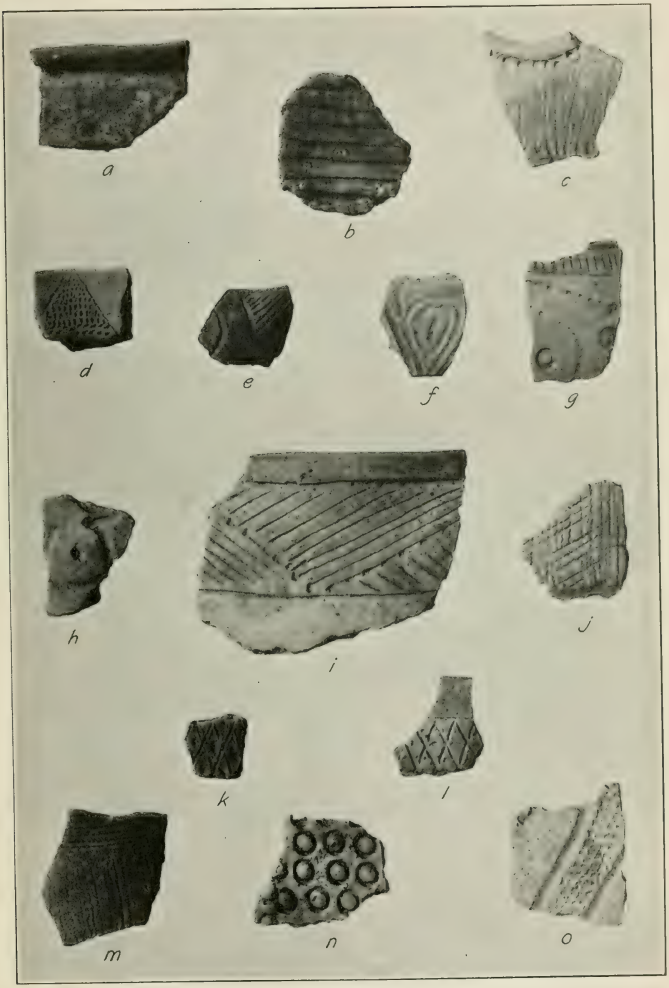
IMPRESSED TYPES OF DECORATION.



CORD-MARKED WARE.



PUNCTATE TYPES OF POTTERY.



LARTO LAKE POTSHERDS.

a. Artifacts of chipped flint.

b. Stone artifacts

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